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INDICES

TO

The China Medical Missionary Journal.

Vol. XIX, 1905.

INDEX I. GENERAL.

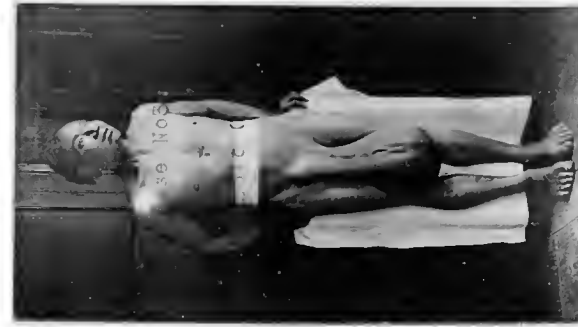
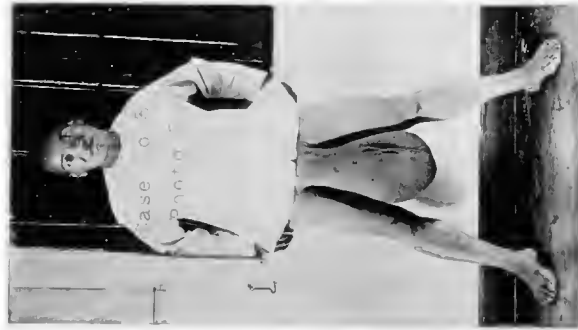
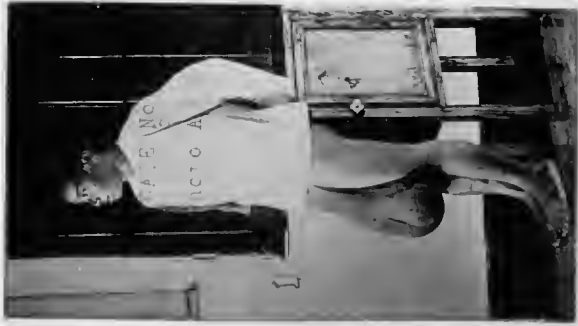
Abscesses and Ulcers	...	...	...	ORIGINAL.	84
A Case of Dysentery in Hunan Province Caused by the Trematode Schistosomum Japonicum	}			..	243
A Great Need...	...	...	...	EDITORIAL.	197
A Kindly Offer	...	...	...	CORRESPONDENCE.	32
A New Departure	...	...	...	EDITORIAL.	26
A New Hospital	...	...	...	HOSPITAL REPORTS.	161
A Mistaken Diagnosis	...	...	...	CORRESPONDENCE.	120
After the Battle	...	...	...	ORIGINAL.	141
An Undescribed Tumor of the Upper Jaw...				..	184
Artificial Respiration in Acute Opium Poisoning	}			..	217
Canton Medical College—Opening Ceremonies				HOSPITAL REPORTS.	34
Cases of Gangrene and Abscess	...	...	...	ORIGINAL.	133
C. M. S. Hospital, Hangchow	...	...	...	EDITORIAL.	153
Chinese Medical Translations	...	...	...	..	156
Christian Medical Schools in China	...	...	...	CORRESPONDENCE.	118
Chungking General Hospital for Men	...	...	...	HOSPITAL REPORTS.	204
Diphtheria	...	...	...	ORIGINAL.	127
Diseases of the Skin	...	...	...	M. AND S. PROGRESS.	22
Doctor Neal's Report	...	...	...	EDITORIAL.	26
Editorial (unnamed)	...	...	...	... ..	71
Errata	...	...	...	EDITORIAL.	117
Finances	...	...	...	..	200
Formosa under the Japanese, with Special Reference to the Treatment of Plague in the Island	}			ORIGINAL.	231
Fukien Medical Association	...	...	...	CORRESPONDENCE.	268
Hæmorrhage from the Internal Jugular Vein	}			ORIGINAL.	215
Honor to Whom Honor	...	...	...	EDITORIAL.	116

Hospital Reports	EDITORIAL.	198
Hwai-yuen Hospital	HOSPITAL REPORTS.	121
Hygiene, Hydrotherapy and Physiologic Medicine ...	110, 191, 249	
Kieh-yang Hospital	HOSPITAL REPORTS.	261
Liang-an Hospital	" "	213
L. M. S. Hospital, Wuchang	" "	263
L. M. S. Medical School, Hankow	" "	162
Malta Fever in China	ORIGINAL.	167
McIlvaine Hospital, Chi-nan-fu	"	20
Medical Education Among the Chinese	"	93
Medical Statistics, 1903 ... ..	... ..	27, 28
Medical Missiou Statistics, 1904 ... ..	... Facing page	166
" Nomenclature in China	ORIGINAL.	53
" "	EDITORIAL.	155
" Progress ... ..	... ..	145, 195
" Work at I-chow-fu ... ..	... ..	209
" " , Tai-chow-fu ... ..	... ..	211
Need of a Committee on Medical Publications in Chinese } ...	ORIGINAL.	143
New Hospital, Pao-ting-fu	HOSPITAL REPORTS.	34
Opium Smoking in China	ORIGINAL.	77
Our Next Conference	EDITORIAL.	115
Pathological Notes ... ..	... 109, 145, 189, 246	
Personal Record	36, 75, 126, 166, 216, 271	
Perforation of the Intestine following } Strangulated Hernia with Formation } of Fæcal Fistula	ORIGINAL.	181
President's Address	"	48
Publication Fund ... ..	... 74, 120, 156, 200, 256	
Refuge for the Insane	HOSPITAL REPORTS.	32
Reply to Dr. Plummer's Request	CORRESPONDENCE.	119
Report of the C. C. M. A., 1904	"	29
" " , Editors of the Journal	ORIGINAL.	50
" " Case of Necrosis	"	17
Schistosomum Japonicum	CORRESPONDENCE.	268
Secretary and Treasurer's Report	ORIGINAL.	51
Self-supporting Medical Missiouary Work	"	223
Some Notes on Children	"	226
" Remarks on the Surgical Treatment } of Urinary Calculus	"	131
" Suggestions from the Sanctum	EDITORIAL.	25
Soochow Hospital	HOSPITAL REPORTS.	157

St. Luke's Hospital	HOSPITAL REPORTS.	32
Statistics	EDITORIAL.	116
Successful Surgery	ORIGINAL.	235
Summary of Work at Ka-shing	HOSPITAL REPORTS.	260
Surgical Progress ... ..	... ..	152
Symptomatology and Treatment of Digestive Disturbances }	ORIGINAL.	174
The Advantage of Using English in Teaching Medicine to Chinese Students }	"	105
The Conference of the C. M. M. A. ... ..	... ..	37
The Customs' Medical Report	EDITORIAL.	199
„ Cheerfulness of Death	ORIGINAL.	70
„ February Meeting	EDITORIAL.	25
„ Medical Conference of 1907	„	254
„ Kuling Organization	CORRESPONDENCE.	267
„ Medical Missionary Association of China }	ORIGINAL.	61
„ Missionary Side of Our Work... ..	„	137
„ New St. Luke's, Shanghai	„	18
„ Opium Curse, Sui-ting-fu	HOSPITAL REPORTS.	122
„ Rolls	EDITORIAL.	154
„ Situation in Manchuria	ORIGINAL.	35
„ Training of Medical Students in Medical Mission Colleges }	„	97
„ Summer Associations	EDITORIAL.	255
„ Tragedy of Lien-chou	„	255
Through Nature to God	„	115
Tooker Hospital, Soochow	HOSPITAL REPORTS.	159
Tropical Disease—New British Expedition ... ..	... ..	165
Tsing-kiang-pu Hospital	HOSPITAL REPORTS.	32
Tuberculosis of the Joints	ORIGINAL.	66
Tung-kun Medical Mission Hospital, Rhenish Mission }	HOSPITAL REPORTS.	201
Useful Accessories	CORRESPONDENCE.	31
Welcome	EDITORIAL.	199
What Shall We Do With a Fellow-worker Who Has Appendicitis? }	CORRESPONDENCE.	30
Williams' Hospital, American Board	HOSPITAL REPORTS.	257
Woman's Hospital, Soochow	„ „	159
Woman's Medical Work, I-chow-fu	„ „	206
Work Among the Chinese Insane and Some of Its Results }	ORIGINAL	1

INDEX II. AUTHORS.

BOONE, H. W.		
Malta Fever in China	... ..	167
BOOTH, R. T.		
Secretary and Treasurer's Report	... ..	51
CHRISTIE, DUGALD.		
The Situation in Manchuria	... ..	35
President's Address	... ..	48
After the Battle	... ..	141
COCHRAN, SAMUEL.		
Artificial Respiration in Acute Opium Poisoning	... ..	217
COUSLAND, PHILIP B.		
Medical Nomenclature in China	... ..	53
Need of a Committee on Medical Publications in Chinese	... ..	143
DAVENPORT, CECIL J.		
The Missionary Side of our Work	... ..	137
GILLISON, THOMAS.		
The Training of Medical Students in Medical Mission Colleges	... ..	97
HEARN, A. G.		
Perforation of Intestine following Strangulated Hernia with Formation of Fæcal Fistula	... ..	181
KAHN, IDA.		
Self-supporting Medical Missionary Work	... ..	223
LINCOLN, C. S. F.		
The New St. Luke's, Shanghai	... ..	18
Report of the Editors of the China Medical Missionary Journal	... ..	50
Some Notes on Children	... ..	226
LOGAN, O. T.		
A Case of Dysentery in Hunan Province Caused by the Trematode Schistosomum Japonicum	... ..	243
MAXWELL, J. L.		
An Undescribed Tumour of the Upper Jaw	... ..	184
Formosa under the Japanese, with Special Reference to the Treatment of Plague in that Island	... ..	231
MCALL, P. L.		
Medical Education Among the Chinese	... ..	93
MCCARTNEY, J. H.		
Tuberculosis of the Joints	... ..	66
MEADOWS, J. G.		
Successful Surgery	... ..	235
NEAL, J. B.		
McIlvaine Hospital, Chi-nan-fu	... ..	20
Medical Statistics for 1903	... ..	27
The Medical Missionary Association of China	... ..	61
OSGOOD, E. I.		
Abscesses and Ulcers	... ..	84
PARK, W. H.		
Opium Smoking in China	... ..	77
PLUMMER, W. E.		
Report of Case of Necrosis	... ..	17
Case of Gangrene and Abscess	... ..	133
Hæmorrhage from the Internal Jugular Vein	... ..	215
SIAU, T. K.		
The Advantage of Using English in Teaching Medicine to Chinese Students	... ..	105
SWAN, J. M.		
Some Remarks on the Surgical Treatment of Urinary Calculus	... ..	131
VERNABLE, W. H.		
Symptomatology and Treatment of Digestive Disturbances...	... ..	174
WILKINSON, J. R.		
Diphtheria	... ..	127



ELEPHANTIASIS OF THE SCROTUM WITH RIGHT INGUINAL HERNIA.

[This is a photo of a patient with elephantiasis of the scrotum who desires operation. Photo C shows that he has a right inguinal hernia (reducible). The writer would be glad to know if it would be advisable to do an operation for the radical cure of the hernia before attempting to remove the scrotal tumour.

W. E. PLUMMER, M.D., Wenchow, China.]

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WORK AMONG THE CHINESE INSANE AND SOME OF ITS RESULTS.*

By C. C. SELDEN, M.D.

Many who have come together to-day will remember that two years and more ago we met in this room, a company of mourners, to pay our last tokens of respect to the illustrious surgeon, the beloved and honored Christian man, Dr. John G. Kerr. The house in which we are gathered was of his building and that in which he spent the last years of his life; and the institution of which you will hear to-day was of his creation.

HISTORY.

There are here some who have come to Canton more recently, and will know little of the history of this work. It may, therefore, be interesting to tell some of the circumstances of the founding of this, the first asylum for insane in the great empire of China.

In 1892 Dr. Kerr bought with his own means a piece of land at Ha-fong-tsun, consisting of seventeen Chinese acres. In 1897 he was able, through the kindness of those willing to help, to erect two buildings. In February, 1898, nearly six years ago, the first patient was received. Mrs. Selden and I had but recently arrived in Canton, and I remember that one patient, together with the second one admitted. They filled very little space of the two great buildings, and the place had the appearance of being deserted. Dr. Kerr lived to see a very different condition of things; for the buildings were both filled to comfortable fullness. We have now something over sixty inmates.

* Read before the Canton Missionary Conference.

Before coming out to China I received a letter from Dr. Kerr, who had learned of my intention to come to Canton. He asked whether I would perhaps entertain the idea of taking up this new work for the insane. I replied that I did not feel I was able to undertake such kind of medical practice. We came to China and saw the Refuge with its one or two patients. Dr. Kerr said he had hoped we might be the ones for whom Mrs. Kerr and he had been praying as the ones to conduct this work when he must give it up. For three full years we were sure the Master had something other than this for us to do. We thought it was a work for children, and it was for this that we had come out. I had been particularly afraid that Mrs. Selden could not be near or be in any way connected with the insane. She, on the other hand, thought I was not strong enough of nerve to undertake it. But one evening, when we were living in Macao, Mrs. Selden said: "Can it be, after all, that the Lord wishes us to do that work for the insane?" That was enough. We soon wrote to Dr. Kerr to ask whether he thought we were strong enough and otherwise able to do it. We received, as reply, an invitation to come to Canton to visit him and Mrs. Kerr for a few months, that we might see for ourselves and determine.

We came up in great fear and trembling, just about this time, three years ago. I had opportunity to become acquainted with the work, to make up my mind I would dare to undertake it, and we both agreed that we would venture. Early the following summer Dr. Kerr was taken ill, and in August passed away. Thus the Master, by giving us several months of intimate association with the founder of the institution, made comparatively easy for us the beginning of the work which we had so greatly dreaded, but for which He had, unknown to us, brought us out to China. Now we are as sure it is what He intended for us as we are of our own salvation, which means absolutely certain.

It would seem only like another link in the chain of God's mercies, that now, as it is imperative that we go home for a furlough, we have the prospect of another physician coming out; for it is not every one who chooses to undertake this kind of work.

The Refuge is an entirely independent institution, and has been such from the beginning. All the current expenses are practically met by the income from the inmates. The Board of Trustees consists of Rev. H. V. Noyes, D.D., Mrs. John G. Kerr, Mr. Lei Yok-tin.

I should like just here to stop a moment to thank the Rev. Alfred Alf for his ever ready help in the evangelistic work and for his care of the business part of the Refuge as well, at such times as I have been obliged to be absent from the city.

NUMBERS AND CONDITIONS.

The insane constitute a very helpless class in China. There are native foundling houses, and native leper homes, and homes for old men, and hospitals for all sorts of physical ills, such as they all are. But no provision has been made by China's government or China's people for the insane. If caught upon the street doing anything out of the way, they are arrested and thrown into prison as if they were criminals. And yet they are not few in number. Dr. Nevius, writing from Shantung, said, many years ago: "There is no national, provincial, nor private hospital for the insane in China, nor has there been in the past, neither has any been established by foreign residents. Insanity is very common in all its forms throughout the country. My students each know of many cases near their homes and meet many insane in their journeys. In this province alone the number would doubtless exceed ten thousand. I have on my premises here at this time a class of nine native theological students, who have confirmed and supplemented my own observation and study of the insane."

A little while ago, while in the company of my medical students and native teachers, fifteen in all, young men, I asked how many had seen insane people elsewhere than in the Refuge at Fong-tsuen. These young men were from many different places of Canton and the country. There was not one who had not seen insane persons. The one who had seen the least had seen two; one thought he had seen as many as ten. It is very difficult to determine how many there really are. I have been asked by letter from men in America what proportion of the Chinese are insane and how the numbers agree with the same class at home. But there is no way at present to determine. There are no statistics collected by the government. All say, when asked: "Yes, there are many." Many are kept chained in the homes and are not allowed to go abroad, so that few know about them.

But there are no restrictions put upon them by the government. So long as they are not found stealing or suspected of such, or doing anything violent, they may go about at will.

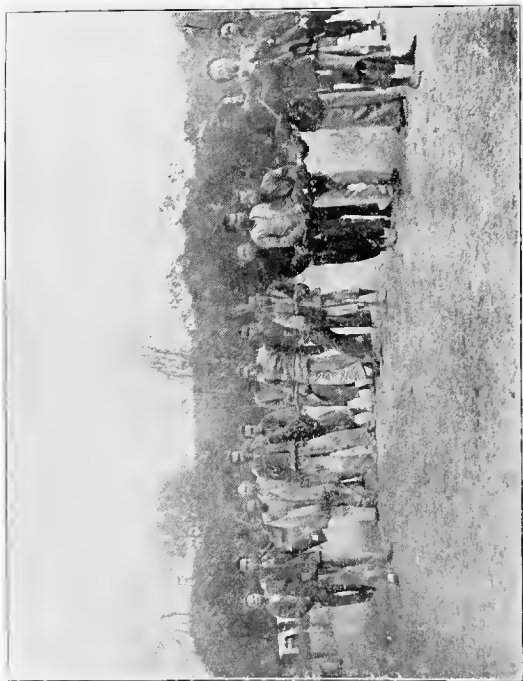
I was recently asked about this matter on behalf of a certain steamship company, as to whether lunatics would be allowed to land at Canton. This steamship company has been offered the contract of bringing fifty lunatics from Australia back to China, and wished to know whether there would be any difficulty in landing them. Besides asking the Chinese, I turned also to the Customs for positive information, and learned there is no restriction whatever made by the government.

But I begged the agents to use their influence in trying to induce the company to wait until the winter should be passed and the warmer weather should have come ; because it would be cruel to bring them just after passing one severe winter in Australia to China, where they must endure another winter with no means for providing for them as far as the agents knew. Wishing to know positively whether any provision were made in China for insane persons, I wrote to the Viceroy Tsen of the Two Kwangs to ascertain officially, and received in reply the following :—

“I am extremely glad to note that you have been interested in enquiring about habits and customs. As regards lunatic persons, I beg to inform you that in case the patient behaves himself in disorderly way, is armed with weapons and cuts and wounds others, he will be arrested and imprisoned by the authorities or by his father or family relative and kept strictly chained. But if the patient be found quiet he will be allowed the liberty of going anywhere, and no one is appointed to have authority over such.”

There are many insane among the Chinese in Hongkong. Dr. Laing told me he thought there must be five hundred. When arrested upon the street, they are brought to the asylum for insane, where they are detained for a short time only, unless they are real Hongkong Chinese. By far the greater number are sent up to Canton in squads as they collect, and are delivered over to the magistrates. Those who have friends are given over to them. Such as have no friends are allowed to go at large if peaceable ; otherwise they are locked up in prison. We have had many cases at the Refuge who had come back from Hongkong or whose homes were still in that city.

If the member of a household becomes insane and unmanageable or troublesome, the common custom is to chain the person to a post or a heavy stone in the house, so that he or she may not be able to go out into the street or do violence to men or things. The writer saw a woman in Canton who had thus been chained about the neck for fifteen years. The chains used for the men are sometimes very heavy. A man was brought to the Refuge last year chained, neck, hands, and feet. We set him free at once or very soon. He recovered rapidly and went out a well man, save for one hand which, because of the tight binding it had undergone before coming to the Refuge, and the injury done thereby to the nerve supply, was still of little use in holding things. Many bear the marks of the whippings or poundings they have received or of the fetters that have been on hands or feet. Two have come in : the one a slave girl, the other an old man, with thumbs badly burned.



PATIENTS AT REFUGE FOR INSANE OUT FOR EXERCISE.

This mode of torture is inflicted by placing upon the thumb nails a little piece of wicking soaked in oil or kerosine, which is then lighted and made to remain in place. The object of this procedure is to determine whether the victim is only obstinate and disobedient or really insane. It is also used sometimes as a remedy to drive out the insanity.

Knowing nothing of the real nature of the malady, the friends can have recourse to no other efficient plan of treatment than the use of the chain, although this is far from curative. Dr. Kerr said in his introductory article of the first report of the Refuge for the Insane which now bears his name that the father does sometimes use another form of treatment with a case of insanity occurring in his family, the shortest and most effectual; because he has the right of life and death over the members of his family. I have been told recently that it probably seldom occurs now that parents thus dispose of insane sons or daughters, but that, if left in the care of others, they do without doubt sometimes meet such an end. If he had not been restrained by the power of persuasion, the husband of an insane woman at the Refuge here would thus have done away with his troublesome wife.

On the street they are mocked and laughed at. There is in the Refuge now a woman who had been followed by street rowdies and stoned from one end of the street to the other, when, happily, she was brought to the Refuge by the district watchman. In the family they are often treated as strangers and confined in dark rooms. If they tear their clothes and other things, the closest relatives sometimes disown them.

But this is by no means always the case; we have abundant opportunity to see at the Refuge exhibitions of true affection on the part of the family for their insane, especially if it be a son.

I well remember one case in particular. An old, withered up, crooked little beggar woman had an insane son, a most worthless wretched piece of humanity. But she was a mother and he was her son. She came occasionally to see him and to bring him some heggarman's delicacy. At one time he fell sick and was quite miserable. His poor old mother was very, very sad. She came often and stayed with him for hours at a time, he sitting close up to her or with his head in her lap as if he were a son of the greatest promise. He was capable of very little reasoning, but he knew what love meant. And the old mother's love for her wretched hoy was as genuine as yours or mine for those dearest to us. I think the tears would have come to the eyes of some of you mothers here had you seen the look of anguish on her face one day when he was worse and she was holding his head in her lap. Then came a time

when she stayed away, and we never saw her again. Probably the poor, lonely, old body died without the comfort of her dear boy to close her eyes. But I have always been glad for her that she was the first, because he later became very ill and died also. The Lord Jesus is coming as judge of the dead and the living, the learned, the untaught, and the insane. Perhaps with all the falsity of their worship, their hearts at the end longed for and found the truer love of Him who was loving them all the time.

I have seen the eyes of a man of forty-five years fill with tears on learning that his insane but beloved wife had died of cholera. And no less evident, in many cases, is the heart joy over the recovery of a son or other member of the household. And the nice things they sometimes bring as presents are a testimony to this gladness with which they receive back those who have been as estranged. Recently a father said to me while paying his son's monthly rice bill: "You need not be afraid I will deceive you after all you have done for my son." That son is still not well, although better than he was. He is the one, by the way, who, because of his strength and violence, was brought to us in a pig basket.*

But great indifference is shown in other cases. A father came a short time ago to take away his son who had been insane for six years and had been in the Refuge for only three months. He was decidedly improved, and I was hoping he would eventually recover fully. But his father said he must take him away because he had not the money to keep him there any longer. He said: "I will take him home and feed him on congee and sweet potatoes."† I tried to reason with him that his son was in a fair way to recover, and told him I would be willing to accept less if he would like to have him stay." Oh! no, he said, "his mother wished to see him; I will take him away." This man always kept his hand over his mouth.

One nice looking young woman was left at the Refuge for months after she was all well. We learned that the husband had said that any one might have her for one hundred dollars. A mother came to see her son who had been in the Refuge for two months afflicted with melancholia. Seeing he was not well she wished to give him to me as a slave. A feeling of horror came over me at the idea of becoming the owner of a human being, and such a being too. I encouraged the mother to wait and visit her son a month later. When she came he was improved and eventually was wholly restored in mind. After his recovery, having liberty to

* Used for the transportation of pigs.

† This bill of fare very nearly approaches starvation rations.

go about the premises as he pleased and even into the street, he one day exceeded his allowance and went with many other Chinese to attend what the Chinese call the "yap fo" (Dedication—"bringing in of the goods") of our new house. That night he did not return to the Refuge, and we could get no trace of him. The following morning he came back voluntarily. He had, during the night, been chased by a policeman who had taken him to be a thief. He had jumped into a canal where the water was to his neck in depth in order to escape from him, and he had on his arm some marks of the blows he had received from a club. A girl is at the Refuge now, about well, who also is not wanted by her owners. They are determined to sell her to any one who will give nineteen dollars for her. She is so well behaved, is so helpful by her industriousness, is so loath to go back to the wretchedly sad life she had to lead; and our good matron is so desirous to have her there to help her that I shall probably redeem her from her owners and set her free. She will, probably, for a good while be content, as she now is, to remain and help us in the work for the other women.

CHINESE THEORIES ABOUT INSANITY.

It is the universal belief among the idol worshippers, that is, among others than the literati, that the insane are under the influence of the evil one. This was the accepted belief in the time of our Lord in the land of His birth. And whether He only adopted the common language used for these cases—for He came not to teach first what we call pure-science—or purposely did so as expressing what He knew to be the truth, we do not know. But He did speak of such exhibitions of deranged reasoning powers as being caused by the indwelling of evil spirits. And the disciples followed His example in this as in other matters. This is somewhat similar to the belief of the North American Indian and many untaught peoples that physical ills are caused by the indwelling of evil spirits in the man concerned. The Chinese also believe that the immediate cause of insanity is the presence of mucus choking up the "sam," that is, the internal organs within the chest (which may mean the heart or lungs or even the stomach, so indefinite is their knowledge of what really exists or the location of each).

They are entirely ignorant of the fact that the seat of the disease is in the brain.

REMEDIES USED BY THE CHINESE.

The Chinese doctors do try to cure these mental diseases, or at least to cure the patient himself. One remedy used by them is what the Chinese call "t'ung-yau," the oil of *aleurites cordata*. It is adminis-

tered in the form of little cakes containing the oil. This oil causes very violent and repeated distressing vomiting. The aim of the physician is to make his patient throw off thus his insanity. We had a very unpleasant experience in the Refuge once with some of these cakes, which were smuggled in by a disobedient private attendant. He gave them to his own patient, but he would not eat them. So the attendant left them outside where the others might get at them, well knowing, of course, that they would soon disappear as any cakes would. They did disappear, but they soon reappeared. We had several very sick patients for a half-day. But there is one remedy sometimes used which may be beneficial. I refer to hyoscyamus or henbane. This plant is indigenous to Kwang-tung, and is called "ngau-yeung-fa." Of this a tea is made and administered to bad cases of mania. Whether this is done just as the people will take sometimes any leaves or grass and use it for medicine without any foundation for belief in its value, or whether it has been found out by experience to have a quieting effect upon cases of mania I do not know. But it is a remedy used in the homelands in extreme cases, losing its power after one or two doses. In the case of which I know of its having been used for an insane man, it did have this effect; but it probably acted in another way from what it should. It made the man so sick, so upset his digestion, that he kept quiet undoubtedly from sheer inability to keep up his activity.

OUR OWN METHOD OF TREATMENT.

As regards our own treatment we depend upon the regular, quiet life of the asylum; the absence of over-restraint; looking after the general well being of the patients; occupation, when possible, for hands and mind; more than upon any drugs. As soon as we can manage it, we mean to make more use of the daily bath as a curative measure.

Perhaps those who live near by smile at my speaking of the "quiet life." But it is free from most of the irritation to which many of these patients have been subject in their own homes.

I like to talk to them as reasonable creatures as far as I can use their language. Some of them like to talk. Others will not utter a word.

Of course in some cases we use special treatment; but in many all that seems necessary is to get them away from their old conditions and look after their health, teach them and restrain them when necessary. This restraint is effected by binding their hands together behind by a band just tight enough not to allow their slipping it off. Occasionally we have to bind their feet also. But it is only for discipline and is



RESTRAINT NETTING FOR INCONTROLLABLES.

usually continued for only a short time. Occasionally we put the hands and feet in irons for a time, but it is seldom necessary unless it be because of lack of rooms in which to isolate, which condition is deplorable indeed.

One method we have found very effectual in cases of those who in cold weather will unclothe themselves, or who are ill and should lie down but who persist in getting up, such again as are maniacal and should be kept quiet—these we lay down on their bed boards and cover them with an iron netting, which is fastened tightly to the bed boards. Inside of this cage the man or woman is perfectly comfortable; can turn from side to side and eat food, but cannot get up into a sitting or standing posture. This has been a most useful piece of furniture and means of restraint when restraint has been necessary.

I must speak especially of the need of kindness. They usually appreciate it. Many had not experienced it before entering the Refuge. A new attendant who knew not how to treat the patients, was chasing an insane man for some reason, and threw him down on the grass. As soon as the insane man saw me coming he said: "Doctor will not do that." He let me go right up to him and he walked with me without any trouble to his room. It is far easier to manage them if one is kind to them. As a matter of treatment I have been trying recently to get the patients to work, and we have now daily from twelve to sixteen at work at something useful. I hope gradually to have more of them employed. This requires more helpers, as one man cannot manage many and teach them to work. The men have been breaking stone for the new building we are hoping to erect. The women unravel old rope, braid it and make it into door-mats, which we sell, and shoes for their own use.

The patients are far better for having employment for hands and minds. When they are at work they have not time to do unreasonable things. One woman used to pull her clothes all apart, thread by thread, and perhaps wind the threads into a ball. Now she works every day industriously with her needle, gets a penny a day as the other women do in the way of encouragement, has not, for two or three months, done anything out of the way, and is very happy.

One man, whose hands we must have in irons because he is so liable to outbreaks of rage in which he would strike others and because from lack of room he could not be isolated, has been at work breaking stone for many weeks. After two or three days we took his hand-cuffs off and have never had to replace them. Only once in all that time has he struck any one, although day and night he is with five to seven others.

Patients for whom we have not yet found work, if they can walk, go out twice daily for exercise, and between times may walk or lie down or sit down as they please; the doors being open many hours of the day.

Every bit of water used in the kitchen, and much of that used for washing floors, is brought from the river in pails by an insane man. He is very strong, and whenever we wish any heavy work done we call on him. He has no one to care for him, or to care for, and is content to work many hours a day for little more than his food and a place to sleep.

Do not think that we never have to administer medicine. We often use it for quieting maniacal patients and for other forms of insanity. And we have had a great variety of intercurrent diseases and surgical cases to treat. For these people are subject to the usual run of ills as are others, and there is one to which they are more subject by far than other people. I refer to dysentery. This is everywhere among the insane the most formidable disease. While we have had many patients ill with the disorder who have recovered from it, we have beside lost many by death, far more than from any other cause.

It would not be entertaining in the least to the larger number assembled here to hear read out the variety of diseases which have occurred since I have had charge. Two of these became epidemics—the cholera and beri-beri. Last year, during January and a part of February, we had so many cases of dysentery that it was also like an epidemic. But it was traceable to the patients getting uncovered at night and catching cold. This winter, thus far, we have had comparatively very few cases of this disease, for which we are thankful. It is owing, at least partly, to the lesson we learned last year in watching the patients more carefully and seeing to it that they are kept warmly clothed.

It is not always easy to treat the insane in time of disease. It is true, however, that many cases are very easy to manage. It is a striking thing that many times these patients are, during an intercurrent physical illness, much improved mentally. It has been suggested by some practitioners that insane patients be taken to where they will be exposed to the malarial miasma and may get the fever, in the hope that they may recover from the mental disorder.

We have often had opportunity of observing that patients who were before morose, uncommunicative, apparently absolutely heedless of what was said to them or of what was going on about them have, in case of illness, become like different people, talking quite rationally. I cannot say, however, that this has been permanent. Some, on the other hand,

are just like children, with no more power of discretion or communication. We have to study their condition as one does that of children who cannot tell their feeling.

The most troublesome case, or the one troublesome for the longest time, was that of a man who fell within the Refuge grounds and broke the neck of the femur,—upper end of the thigh bone. This is hard enough to treat in the case of a well man, but you may imagine the trouble we had in keeping this insane man quiet for the many weeks necessary to get the fragments firmly united. At first I applied a long splint reaching from armpit to heel and trusted to bandages. But these the man removed. We tied his hands, but he moved his legs around and got everything out of place. But even under these adverse conditions union had begun to take place when, one night, a man in the same ward, who we supposed had recovered, suddenly had a relapse of insanity. He pulled the patient with the broken bone down from his bed and dragged him around the room before help could get to him. The result was the bone fragments became separated again. Then came a most trying time. Every device I could apply seemed to be of no avail. I was afraid the man would die of exhaustion, after his long confinement, before union would take place. But what was my delight to find one morning that, even under these most unfavourable conditions, the fragments of the bone had, without doubt, begun to knit. Thus after being for between three and four months on his back, he finally went away a well man, a little lame in that one leg, yet able to walk pretty well; and at the same time he was cured mentally.

One thing very annoying is to have patients persist in removing dressings. But it is a very common thing, and we often must tie a patient's hands until the wearing of the dressing becomes no longer necessary.

I spoke of the most common, or a very common, cause of dysentery in the past being catching cold after getting the bed clothing off at night. But there is another cause. The insane are often exceedingly careless in their eating. Some will scarcely chew their food at all, rice or "sung".* And they will pick up all sorts of things and put them in their mouths, even if they do not mean to swallow them. A few days ago, while making rounds, I saw a man with mouth full of something which proved to be a lot of scraps of cloth which he had torn presumably from his clothing. The same day we found a man eating a piece of old dry, hard pumelo skin, of which he had abundance more in his pockets. I suppose it had been smuggled in to him by some friend. We once caught a man trying to swallow, almost without chewing at all, a whole banana skin.

* Meat and vegetables which accompany the rice.

CLASSES OF PATIENTS.

They are from the Yamên and from the street and from every walk of life between. One man last year had been, until a year before incapacitated, the Hip Toi, or Deputy Lieutenant-General. Another was the nephew of the then Pun Yu magistrate. Besides these there have been six others of the mandarin class from the Yamêns. There are the rich and the poor. The former often have their own private attendants. Formerly they were engaged and paid by the family of the patient. But now I seldom allow this, as the attendant will obey his insane master and not us; the result being that the patient is treated about as he would be at home. Now usually we select the attendant and pay him as an employee of the institution. But occasionally it happens that one we call in is also incapable, for it is not every man or woman who is fitted to act as nurse to an insane patient. I was amused some months ago at a sight I saw. We had just admitted a man who, for size and strength, was like an ox, but who was not at all violent. However he would obey no one but my assistant and myself. We found a strong man to act as his private attendant, for he was a rich man. A day or two later I was standing on the veranda of our new home, and, looking off a little to the south I thought I recognized a big Chinese gentleman walking rather fast along a path somewhat removed from the house. It was this ox. Behind him, about ten feet, and following him very meekly as his obedient servant, was his attendant, who was not making the very least effort to take him back to the Refuge, from which he had escaped by a back gate which had been carelessly left unlocked. Before I could get to him some of the Refuge general attendants had come and led him back.

We have had as inmates many students, but, I believe only one degree man.

The patients come from Canton and from different parts of the province. Among them there have been a goodly number originally from other provinces, but at the time resident in Kwang-tung. Many have come from Hongkong. They speak many different dialects. There is a great disadvantage in this, because I cannot myself judge as to the working of their minds as indicated by their speech. I must depend very largely upon my assistant, and often it happens that he, too, cannot understand.

We have old men and maidens. One little girl of twelve years was brought to us two weeks or less ago, suffering from the agitative form of melancholia. Happily now she appears to be all well. It was caused by physical illness in the case of a nervous system with a tendency to insanity.

There are many different forms of insanity. Three of the patients have thought they were Chinese kings, or some high magistrate. The king repeatedly asked when he would be allowed to go out. I suppose he meant to administer state affairs. He recovered fully and went home. He had been a hard drinker, and his friends asked me to caution him to leave drink alone.

One very painful case was that of a woman who thought thieves were breaking into her house. She would say : " 'There they are now ' ". I tried once to see if I could not convince her that she was mistaken, by asking her how they could get in between the strong iron bars of the window. She smiled and went off as if ashamed. But soon the hallucination and delusion returned, and she was in as much fear as before. She would sometimes carry all of her things around with her done up in a bundle, go about from one room to another in vain attempt to get away from this robber, who was following her. She must have suffered dreadfully, and it was painful to see her in such distress. One day I heard her crying as if in great pain and very excitedly. When I entered her room, I found her lying face down, holding under her her bundle of clothes and crying, "He has struck me, he has struck me." She was in agony, and my pity did go out for the poor creature.

Many patients are very destructive. Clothes and bed clothing are torn to shreds; even clothes made of strong canvas are torn open and removed. Repairs are going on most of the time on the building. We cannot use glass in the windows of more than a very few rooms. Very few of the original windows have a pane of glass left, and indeed very few have a chip of wood left as evidence of the original window. The venetian blinds always have patches of white, where the slats have been broken and replaced by new unpainted ones, or the blinds are entirely gone.

Besides the really insane we have several imbeciles.

There have been among the inmates a goodly number of Christians; at one time about one-seventh of the whole number. Not that the proportion can be taken as obtaining in general, but because Christians more widely know of the institution and are at once willing to send their insane to us. One man, a Christian belonging to Mr. Nelson's church, had once been connected with the Chinese legation at Washington and later had been in Havana. He was for several years in the Refuge with no hope of recovery. He was in good health physically and very glad to talk, especially in English. He was very solicitous for our health, and always had some advice to give about what to eat or how to dress warmly. One day I said to him, as often I did : "How are

you to-day?" "Oh!" he said, "very well; I am always very well. Your medicine is very good. I advise you to take a great deal of it yourself." This same man I found once staying a great deal in his room and loath to go out to walk. One day I caught hold of his hand and pulled him gently, urging him to come out into the yard. "No," he said, "my feet are so short and my hands are so long I really cannot go out."

Another English-speaking patient wrote to a friend: "This is the greatest menagerie you ever saw," unconscious of the fact that he was himself one of the most interesting features of the show.

One man, the Hip Toi, of whom I spoke before, managed to escape one evening; through the lack of vigilance of his own private attendant, seized a great knife used for hewing timbers in the neighboring shop and ran up the street. His own attendant, who had come with him, was afraid to go after him, but our own brave men followed him in the near darkness, up the street and out over the logs floating in the water for some distance, captured him and took the great knife from his grasp. When word reached me I hurried over and found they had the man laying down across the logs held by their strong hands. We got a boat and brought him to land and back to his room. I promised not to tell anything shocking, so that is all of this case. He recovered almost fully, and then his wife, unhappily, wished to take him home, thinking he would complete his recovery there.

One woman, the wife of a petty mandarin, gave birth to a child a few months ago. She showed not the very least affection for her offspring, and it was necessarily taken away from her after a week. This is very sad, for the child will probably some day be an inmate also.

Insanity is inherited in its tendency. It often changes off with other forms of nervous affection. A man or woman may be an epileptic, and the son or daughter insane, or vice versa. Or they may be insane and a son or daughter subject only to asthma. The grandson or granddaughter again may be insane or may have chorea, or some other lighter nervous trouble.

But here it is very hard to get any family history of nervous diseases. Only in comparatively few cases has it been possible. At first I did not know whether it was because the relatives did not like to confess it, or that they were not always observant, or whether it was that the inherited tendency was not so marked among the Chinese. Indeed, in many cases nothing can be known. Especially is this true in the case of women. Many of them have been bought as children and brought away from parents and friends and perhaps sold again, so that nothing

can be known of their family. But as to the others whose families and relatives are well known to those who bring the patient to us, I think I know the reason for the difficulty met with in trying to make out any history of nervous disease. I have observed—and let me tell it here as a delicate testimony to what the teaching of our Lord Jesus is doing for these people—that nearly every case in which I have been able to get a family history of nervous disease has been among Christians. This establishes first the fact that the tendency to insanity is inherited here as elsewhere, and secondly, that in spite of all too many disappointing exceptions the Christians are the truth-loving part of the community.

There have been a few accidents. A number of the doors and window frames and bedboards are blackened from attempts at incendiarism. One woman dropped down from the veranda and landed, happily for her but unhappily for the man, upon the shoulders of one of the male attendants who was just passing but did not see her. She received one or two little scratches, but he was lame for some weeks.

Once I had another unpleasant experience in being shut in one of the rooms, surrounded by a number of these insane people and with no attendant. It came about in this way. Among the men is one who is full of innocent mischief. Twice it has happened that I have entered the ward in which he was and he has stepped quietly out and locked the door. One time my assistant physician was with me, but once I was quite alone. I must confess I felt a little uneasy until I was able to attract the attention of one of the attendants outside, who released me and re-incarcerated the man who had played the joke on me.

RESULTS.

Altogether have entered the Refuge since its opening until									
January 1st of this year, nearly six years	...	...	...	...	...	...	...	...	287
Of these, still in Refuge, January, 1904	...	...	...	...	...	...	...	...	63
Left the institution during that time	...	...	...	...	...	...	...	...	224
The cured (not including such as have later returned because of relapse)									
Improved	...	...	...	...	...	...	...	87, or	39 per cent
Not improved	...	...	...	...	...	...	...	46, "	20 "
Died	...	...	...	...	...	...	...	29, "	13 "
Doubtful cases (probably not insane, or doubtful as to cure, etc.)	...	...	...	...	...	...	...	47, "	21 "
								15, "	7 "
Total									224, or 100 "

Unhappily we cannot control the patients and their surroundings after they leave us. It so happens that, returning to the same conditions under which they first became insane, they sometimes relapse. But judging from the number that return, they are very few. And

it is probable that the friends do bring them back usually if relapse occurs. One man was in the Refuge for many months after his total recovery. He went home and in two weeks relapsed. One young man who had been insane for a number of years, had been in the Refuge two months, improved only physically, when his elder brother came to take him away for over one night. He returned with him the following day. We learned afterwards that the family, in the hope he would thereafter get well, had taken him to the temple on Fa-tei, Wong Tai-sin, and had him worship there all of one day and one night, for which privilege they had paid one hundred dollars. He remained in the Refuge for several months longer, but did not recover, although he improved decidedly both mentally and physically. I had hoped he might be healed. But if he had been healed, Wong Tai-sin would probably have gotten the credit for it, as usual, for having advised his being taken to the "foreign devil" hospital.

Another young man with mania recovered apparently fully after a stay of only three or four weeks. The family took him home and made a feast of thanksgiving to their idols for curing him. Next day they brought him back in a worse condition than he had been before. He was for months in a dreadful state. I have seen but one or two others as bad. He became also very run down physically. He seemed truly like one possessed of an evil spirit. He had before heard a missionary friend speak at morning prayer service, and when this friend would come any where near him, he would say something about "such doctrine as that," and would spit at him. No description of one "possessed" given in the Bible is so extreme as his case. It seemed like Jehovah's judgment upon him and his family for giving the praise for his cure to the idol. But after a stay of several months he became perfectly well and thus remained in the Refuge for many weeks longer. He turned out to be a nice boy and very affectionate. When he would see the superintendent coming in the door he would sometimes come and follow him around like a dog. He asked also to be allowed to remain there to work.

One man who had been insane for ten years was brought to the Refuge and left for one month, then taken away because not yet cured.

On entering a certain shop in Canton I have several times seen a bright-faced coolie at work whom I recognized as an old patient of the Refuge. We had a pleasant call some time ago from a fine, intelligent looking man, a school-master from San-niug, who had come in with mania and had gone out fully restored and very near the kingdom of God besides. Occasionally we are pleased to have calls from others of the



CASE OF NECROSIS.

old patients. If we must see them enter in a condition wholly unfit to meet the struggle of life it is most satisfactory to see them go out in their right minds.

Two women have come to us who had become insane after losing a child by death; also one man. One of these women was a fourth wife. None of the other three wives had had any children. This woman gave birth to a child, but it soon died and the mother became insane. She recovered fully after a few months and remained in the Refuge for many weeks longer, perfectly well.

There are almost always one or more patients, both men and women, who have recovered and who are only remaining a while longer until their friends come to take them away. I am not sorry to have them stay. They help much in taking care of the other patients. They are kept away longer from the conditions which may have caused their insanity and which are likely if unchanged to produce a relapse; and they have longer opportunity to hear the blessed Gospel.

REPORT OF CASE OF NECROSIS.

By W. E. PLUMMER, M.D.

NECROSIS OF THE FEMUR.—Sinus of ten years' duration. Sudden swelling of knee joint with discharge of serous fluid by above sinus. The patient is a young man aged 31.

History.—The disease began ten years ago in the lower end of the left femur and at the same time in the lower end of the right tibia.

The disease in the later position terminated with the extrusion of dead bone; a scar which can be seen in the photo just above the right ankle, indicates the former location of the disease. The left thigh has had two sinuses since shortly after the disease began; they have discharged pus ever since. The day before admission the knee-joint swelled, became painful, and much straw-coloured serous fluid came away by the inner sinus.

Condition on Admission.—The lower half of the left thigh and knee-joint is swollen, the circumference is five inches more at the greatest diameter than at the corresponding point on the sound side. There are two sinuses: one on the inner side (shown in the photo), about two inches above the inner side of the knee-joint; and another on the other side of the thigh, about four inches above the outer side of the joint.

The skin over the articulation is hot, and a fluctuating swelling corresponds to the anatomical position of the synovial membrane; movement of the joint is painful. A probe can be passed in at one sinus and out at the other, passing just behind the femur, which is much enlarged. The patient has been accustomed to use a stick in this way every day.

At a depth of one and a half inches from the inner opening, dead and loose bone can be felt, and by this opening light straw-coloured fluid is constantly escaping; the flow can be increased by pressing on the front of the joint. After three days' rest in the hospital the discharge ceased, the swelling heat and pain of the joint subsided and the patient went out, arranging to come in later and have the dead bone removed.



THE NEW ST. LUKE'S, SHANGHAI.

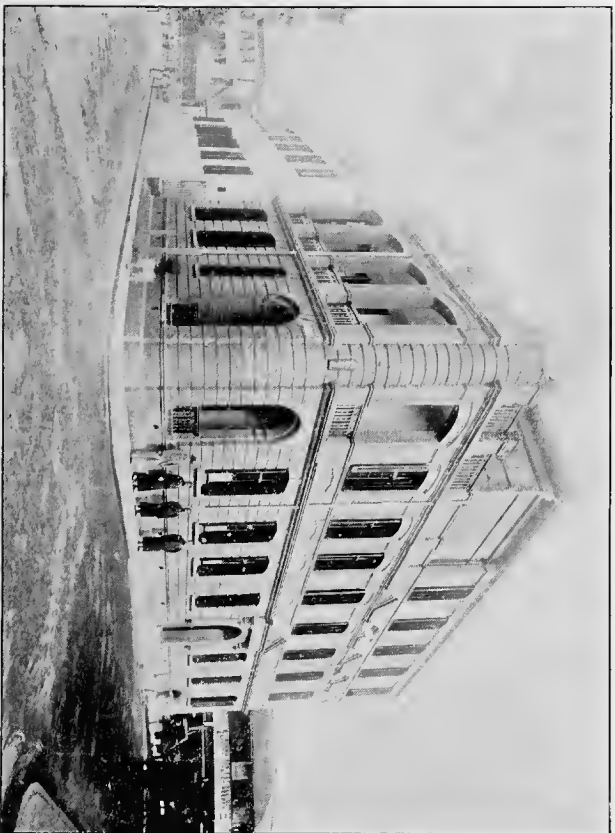


By C. S. F. LINCOLN, M.D.

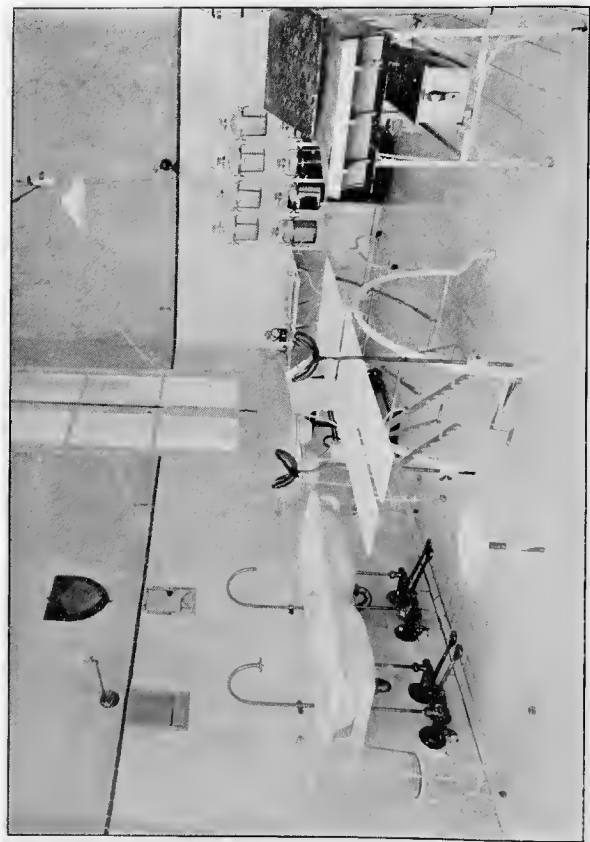
On the 26th of October St. Luke's Hospital began a new era of usefulness by dedicating its new main building, which has been under construction for over a year.

The building is of the prevailing Shanghai type, built of grey brick trimmed with red, and is triangular in shape. The base and front on Seward Road is three stories high, the south frontage on the corner of Seward and Nanzing Roads being fitted up in Chinese style into an attractive sun parlor and roof garden for convalescents. The apex of the triangle on the Boone Road side is two stories high with the chapel on the first floor and the operating room above.

On the ground floor is a reception room, offices for the physician and surgeon in charge, an emergency operating room for accidents, a small laboratory for clinical examinations, a room for prisoners, and a small ward and the chapel beside lavatories. The second floor has two surgical wards: one large and one small; the operating room with sterilizing room adjoining, bath room and lavatory, and separated by a partition four private rooms with a small verandah for the richer class of Chinese who can afford such luxuries; on the third floor is another good sized ward, the X ray room, a pathological museum, a disinfecting room, four more private rooms and the sun parlor and roof garden. In the hall is a fine traction elevator large enough to take in a ward carriage for the moving of patients.



NEW MAIN BUILDING, ST. LUKE'S HOSPITAL, SHANGHAI.



OPERATING ROOM, ST. LUKE'S HOSPITAL, SHANGHAI.

The new building was a gift from C. B. P. Jefferys, Esq., of Philadelphia. Some of the wards and private rooms were fitted up through the generosity of churches or private individuals at home, and the chapel and operating room are memorials.

The latter, with the sterilizing room, is shut off by an anteroom from the rest of the second floor, and is approached by an inclined plain. It has fine light from the north-west as well as from above. The floor and the walls to about five feet in height are tiled. It is fitted up with all the modern conveniences, such as a hot-water operating table and treadle faucets to the wash basins.

The new building was dedicated on the afternoon of October 26th. In the absence of the Bishop, and Archdeacon Thomson the president of the Standing Committee, Rev. Dr. Pott presided, and after offering the prayer of dedication, called upon Dr. Boone who, on welcoming the guests, gave a brief sketch of the history of St. Luke's with fitting reference to the absence of his colleague, Dr. Jefferys, by whose zeal and the generosity of his family the erection of the new building was made possible.

Dr. Park, of the Southern Methodist Hospital in Soochow, spoke of the work being done in China by all medical institutions founded in the spirit and name of Christ; of the great need for more of them, especially those for the treatment of the insane, and pointed out to his Chinese hearers the lessons in philanthropy and practical religion taught by such work.

Rev. Dr. Timothy Richards followed in Chinese and spoke of the great usefulness of such institutions and the great benefits derived from the introduction of foreign medicine and surgery into China. His remarks were thoroughly appreciated by his auditors and especially by two of the officials present, who kept interpolating a running fire of approval. Dr. Duncan Reid, one of the leading local physicians, who has long been on the staff of the hospital as consulting surgeon, dwelt briefly on the value of such an institution to the community and the variety of cases that were treated there, mentioning the fact that the increase in the number of manufacturing interests had greatly multiplied the number of accidents due to the carelessness of the Chinese in handling machinery. He also spoke in a very kindly tone of the good work being done by our graduates, the house physician and house surgeon. Tea was then served to the Chinese and foreign guests. The hospital having been inspected, the new St. Luke's was formally opened.

Such in brief is the new St. Luke's. That it may long remain to reflect honour upon the cause which it represents, is the prayer of all who have the interest of Christian missions and medical and surgical progress at heart.

M^CILVAINE HOSPITAL, CHI-NAN-FU.

By JAMES BOYD NEAL, M.D.

In 1881 there died in Chi-nan-fu the Rev. Jasper S. McIlvaine, who was the pioneer of Protestant missions in Western Shantung and the founder of the Chi-nan-fu Station of the Presbyterian Board. A man of eminent piety and of real love to the Chinese, he testified to his interest in the people by leaving a legacy at his death of about \$5,000 in gold for the use of the Chinese church in Chi-nan-fu. As, however, it was impossible to procure suitable buildings or to buy land for some years, most of this fund lay at interest in bank for ten years, only a small part of it being used to fit up a street chapel and dispensary on the main street of the city, which was the centre of Christian work for many years.

In 1891 land was procured in a most desirable location on high ground in the east suburb, and here most of Mr. McIlvaine's money was invested in a hospital with accommodations for forty patients, which has been named in his honor the McIlvaine Hospital; memorial tablets being erected in prominent places inside the walls, telling in English and Chinese who Mr. McIlvaine was and how the hospital came to be built. The reason for putting most of the legacy into a hospital rather than any other form of work, was that from the time that Mr. McIlvaine arrived in Chi-nan-fu up to the time that we were able to purchase land, this city was noted for its hostility to foreigners, and it was thought best to start regular hospital work (dispensary work had been going on for many years) as quickly as possible on our new site, in the hope of conciliating the people.

Regular medical work was begun in the new buildings in August, 1892, and we were not disappointed in our hope of drawing the people to us by our philanthropic work, as during 1893, the first full year of the working of the hospital, there were six thousand attendances in all, including 121 patients treated in hospital. During the two years following there was a slight falling off in numbers, owing to the war between China and Japan, but in 1896 there was a total attendance of over ten thousand, and in 1897, the last year that we have full records of until after the time of the Boxer troubles, when all the books were destroyed, there was a total attendance of over eleven thousand, including 260 hospital patients. If in the figures of 1897 are included the women patients, who were also seen in the McIlvaine

Hospital in the absence of the lady doctor, the total amounts to nearly 16,000, showing a very gratifying development of the medical work during the five years of its existence.

The Boxer disturbances in 1900 dealt the hospital a very severe blow, from which it has not yet fully recovered. All the records of the work from 1897 up to the year just mentioned, were destroyed, and the hospital was closed for about a year, being reopened after extensive repairs and alterations in June, 1901. It was a matter of great congratulation that during those troublous times the buildings, all of which are built in Chinese style, were not destroyed; only instruments and drugs being looted, so that the loss sustained was of moderate amount and did not hinder the reopening of the hospital after the return of the members of the Mission in 1901. During the three years since the reopening, the work has been carried on steadily and has been growing moderately year by year, though the total attendance has not yet reached the numbers recorded in previous years. In 1902 there were about seven thousand total attendances, about eight thousand in 1903, including nearly 150 in-patients, while this current year will show about ten thousand; these numbers applying only to men; the women and children being treated in a separate hospital, which is under the care of our lady doctor, Dr. Mary L. Burnham.

The most interesting development in connection with our medical work in Chi-nan-fu during the past three years is the attainment of self-support; no funds being now asked from the Board of Foreign Missions for the running of our hospitals. Every year a subscription book is circulated among the Chinese officials in Chi-nan-fu, beginning with the governor, who starts the list with a contribution of Tls. 100, and is followed by all the other officials of any considerable rank in the city among the well-to-do patients and other Chinese friends, and finally among foreign supporters. From these contributions we receive the bulk of what we need, but in addition we ask those among the patients who are able to, to pay for their medicines and have also a considerable income from sales of *quinine*, *cod liver oil*, etc.; the total amount received being sufficient for all our running expenses.

Taking it all in all, and remembering that we now have a rival hospital supported by the governor in the west suburb, there is reason to look forward hopefully to the future of the McIlvaine Hospital and its work in Chi-nan-fu.

Medical and Surgical Progress.

Diseases of the Skin.

Under the charge of KATE G. WOODHULL, M.D.

Hæmaturia as a sign of Scurvy.—E. Neter in the *Deutsche medizinische Wochenschrift*, May 5th, 1904, calls attention to the fact that a hæmaturia may be the only evident outward sign of the presence of Barlow's disease. He reports a typical case in a well-developed infant of eight months, who had been fed during the previous four months exclusively with malted foods. The child did not seem quite well, but the only result of the examination was the finding of blood in the urine. The diagnosis of scurvy was made by exclusion, and the child was put on a diet of raw milk. In eight days after beginning treatment the baby was better, and no more blood was found in the stools. The author suggests that in every child in which hæmaturia is present, and all other bladder or kidney troubles can be excluded, the presence of scurvy should be suspected. In doubtful cases appropriate anti-scorbutic treatment will always aid in confirming the diagnosis. — *Medical Record*, May 28th, 1904.

SCURVY.

William Fitch Cheney in *Medical News*, June 14th, 1904, declares that scurvy is a disease in which proper treatment works a miracle. It has no tendency to spontaneous recovery, but when recognized and given the proper care, improvement is immediate and cure surprisingly rapid. No other disease affords the physician a better prospect for brilliant results. As to treatment three measures are indicated: (1).

Discontinue the proprietary food. Substitute fresh milk diluted with water, or oat meal water. (2). Give fresh orange juice in dose of one or two teaspoonfuls three times a day. It is surprising how babies with scurvy take to this and seem to enjoy it. (3). Give freshly expressed beef juice squeezed from rare steak, in dose of one to two teaspoonfuls, three times a day. (4). Give no drugs at all. — *Medical Record*, June 11th, 1904.

ERYSIPELAS AND CARCINOMA.

Experiments with streptococcus serum.—At a session of the "Verein für innere medicine," reported in the Berlin letter for the *Medical Record*, May 16th, 1904, F. Meyer reported the results of further experiments with streptococcus serum. The general practitioner will perhaps be bewildered by being compelled to direct his attention to a new serum in addition to those of Marmorek, Behring, Aronsen, and Moser. Nevertheless every new factor in this field of therapeutic effort should be welcomed, even if it affords only slight aid in the battle against sepsis, scarlatina, and other diseases of a similar nature. Meyer employed his serum in a large number of cases of angina, articular rheumatism, puerperal sepsis, and erysipelas. He injected one or two doses of the serum, each from 10 to 15 c.c., and succeeded in reducing the temperature in from twenty-four to forty-eight hours. In angina and articular rheumatism the serum was only used in severe cases. In scarla-

tina only the streptococcus infection was influenced, but not the original disease. Good results were also secured in many cases of sepsis, and especially in erysipelas. The serum is not applicable in closed cavities or organs, such as the lungs.

SOME FACTS REGARDING RADIUM.

At the same meeting Lassar expressed himself as desirous of seeing radium employed to a greater extent by the general practitioner. This wonderful substance, which has so quickly achieved a world-wide reputation, seems to be the subject of simultaneous discovery in many places. Elster and Geitel, two physicists of Wolfenbützel, have found that the lower strata of the atmosphere are radioactive. When a certain kind of mud, "Fangoschlamm," was treated with *hydrochloric acid* and the mixture decomposed by electrolysis, radium was deposited in traces at the cathode. Radiotherapy was fully discussed by Lassar in his interesting address before the "Medizinische Gesellschaft." He employs radium *bromide* in doses of one gm., put up in small capsules, which are applied to the diseased area daily for periods of half an hour, being held in place by adhesive plaster straps. No evil effects have been observed. Thus far he has only treated melanoma and carcinoma, but with better results than had been attained by any other radiotherapeutic method. Among other things he cured a carcinoma of the tongue, securing a localized action of the radium by attaching the tube to the end of a lead sound. Further reports on the results of x-ray treatments elicited a lively discussion on the mode of action of these agents. Numerous cases of carcinoma, especially of the breast, which had been given up as hopeless by such

operators as Bergmann, were treated by Lassar with relief from the pain and the production of smooth scars. Even if this cure had so far only extended over the period of half a year, the patients were at least free from pain, did not have any ulcerations, and had gained in weight. Bergmann remarked, however, that in the patients presented by Lassar, carcinomatous glands and infiltrations could still be felt, and that the rays produced an effect similar to that of the older arsenic pastes, which destroy all tissue, whether diseased or healthy. The knife was to be preferred therefore in every case, for by the other methods the chances of life for the patient would be affected by the loss of valuable time. Moreover, in his own clinic he had convinced himself of the uselessness of radium, and two of his assistants, Schlesinger and Barchard, had treated numerous cases of angioma and carcinoma without success. Excessive tissue destruction resulted in angioma, and after healing had taken place remnants of the growth still remained. Carcinoma, accompanied by simple ulceration, which ran a chronic course, healed with a result similar to that secured by the employment of pastes, but radium cannot be employed in the case of a large carcinoma with deep involvement. In reply Lassar contended that some of the cases which he had presented were mammary carcinoma, which had been considered inoperable, but which in the space of six months had not developed any palpable recurrences. He also believed that the rays had an elective action, and that only diseased tissues were exposed to the process of resorption. For this reason radiotherapeutic measures were far superior to arsenic pastes.

(Who shall decide when doctors disagree?)—*Medical Record*, June 18th, 1904.

The China Medical Missionary Journal.

VOL. XIX.

JANUARY, 1905.

NO. 1.

Editorial.

Happy New Year, friends and readers. Come weal, come woe, we must thank God and take courage. 1904 has been a trying year in many respects for our beloved work. Nanking has had only one missionary physician holding the fort; all the others being temporarily absent, either on furlough or because of illness in their families. Wuhu is about to lose Dr. Hart, though it is devoutly to be hoped that it is only for a time.

The work in Shanghai is hampered by the temporary absence of Dr. Jefferys, the resignation of Dr. Stevens, and the removal of Drs. MacGowan and Cleaver, but we are glad to say that we are to have Dr. Davenport, of Wuchang, with us, in charge at the L. M. S. hospital in Shantung Road. Hardly a month goes by that new recruits for some part of the mission field do not arrive; still the medical work in China is sadly undermanned, and if we accept as accurate the statistics printed in the November number of *Medical Missions at Home and Abroad*, and quoted from the 1903 Report of the C. I. M., that in the eighteen provinces of China there are only 196 medical missionaries, we must indeed look with sorrow and dismay upon any losses from our ranks. So far as I know there has been only one death among the medical band this year, namely Dr. J. Maud George, of the American Reformed Church Mission in Tak-hing-chow, Kwangtung province.

Let us then look forward with hope and expectation to the new year. May the accessions be many, the call to higher service few, and may the Lord of the Harvest bless and keep us, direct us in all our works with His most gracious favor and further us with His continual help that many may be saved from those diseases which hurt the body as well as those which attack the soul.

THE FEBRUARY MEETING.

The JOURNAL again wishes to put in a claim for the demands of that meeting of the Medical Association which is to be held, D. V., on February 6th, and will last until we finish—probably two or three days. That the meeting is to be held at that time is perhaps unfortunate, as it will entail more or less inconvenience upon some of those attending, but the die is cast and we are to have a meeting and as good a one as possible.

There is too much apathy and tendency to hang back in the Association; so if you believe in having one, and that it is not a snare and a delusion, even if it does not realize the highest ideals of such organizations in other countries, bury the hatchet of carping criticism, leave your pessimism at home, and come to Shanghai prepared to do good and receive benefit.

SOME SUGGESTIONS FROM THE SANCTUM.

There are two or three things on the editor's mind that he wishes to turn into accusing type. Perhaps you will say, how about that critical spirit you were deprecating just now? But please remember that there is a distinct difference between criticism, which is merely destructive and the editorial prerogative of attacking existing abuses. The aim of the latter should always be to improve present standards and to render the means at hand more useful to our needs.

In the first place, the size of the October JOURNAL probably made some of the more devoted members of the Association feel as if we were on the verge of disintegration. While regretting the paucity of material the editor simply states the fact that it was all he had in hand. He is averse to padding from our more illustrious contemporaries, as he believes we have men enough and material enough to furnish interesting matter, even though it is not unique in the annals of medicine and surgery.

Our correspondents in their respective departments of surgery, medicine, and dermatology will try to give us helpful notes from other journals which come to them.

If any one sees or tries a new remedy or operation which he thinks would be of practical value, it is his duty to report it, either to the sub-editor of the department in which it comes, or to write directly to the JOURNAL. We ought to realize more fully our mutual claim for assistance in such matters.

The editor also wishes that all hospitals or dispensaries in China publishing annual reports would send them promptly to the JOURNAL. From the straggling manner in which they drift into the sanctum it is evident that only a fraction of those published ever reach us. This is a department of the JOURNAL which is of interest to all and may also be a great help by enabling us to compare our methods of work.

DR. NEAL'S REPORT.

In the present number of the JOURNAL will be found the report of Dr. Neal on the statistical blanks sent out with the January number of 1904. To quote from his letter: "The meagerness of the returns is a great disappointment, as not one-half of the hospitals have reported." Where are the delinquents? Such a state of affairs is quite too discouraging to contemplate and certainly would call for such reproof as it would be impossible for a self-respecting missionary journal to give way to. It is to say the least discourteous to Dr. Neal, who has done so much for the Association in the past and who has the present and future of medical work in China so much at heart.

With the present issue will be sent out two blanks for the statistics of 1904. The recipient may keep one copy himself and fill out the other copy and return as soon as possible to the JOURNAL that they may be published earlier in the year.

A NEW DEPARTURE.

One of our friends and fellow-laborers on the JOURNAL, Dr. Woodhull, suggests that a department of Hygiene be added and offers to take charge of the same if some one will volunteer to take the department of Diseases of the Skin. Is there any public-spirited soul, at present unheard from, who is willing to take over Dermatology from Dr. Woodhull that the new department may be started?

Medical Statistics for 1903.

Compiled J. B. NEAL, M.D.

Below will be found a statistical table showing the results from the blanks sent out with the January number of the JOURNAL, asking for returns to be made of the medical work done during 1903. It will be seen that only about fifty hospitals and dispensaries have responded, probably not more than half the number there now are in China. Among the places which have not sent in reports are Chefoo, Chungking, Amoy, Peking, Tientsin, Chentu, cities where some of the largest hospitals in China are located; while other cities, while reporting the work of one or two of the hospitals, have failed to include some where a very large amount of work is being done, such for example as Shanghai and Foochow.

It is to be hoped that the very incompleteness of the present list may lead the delinquents to fill up the blanks which shall be sent out this year, as soon as received, and send them on, so that the work of 1904 may be more completely reported, and at an earlier date than a year after the close of the period. Following will be found some results of the inquiry which could not be included in the statistical table.

Charges, Fees and Donations. Of the forty-seven hospitals and dispensaries reporting, only six require no regular fees or charges from patients, and of these six, four report donations, leaving only two without any income but the appropriations from their societies. About half have a regular scale of charges for dispensary and hospital patients; others require those receiving medicines to pay only the cost of their drugs. Eight institutions appear to be entirely self-supporting, that is, their income from charges, fees and donations cover all their running expenses, and so they are apparently independent of remittances from the home Boards and Societies.

Training of Medical Students. All but fifteen hospitals report more or fewer medical students; the number ranging from one to eleven. Nineteen have less than five under training, four have five each, while there are nine which have from seven to eleven. Such scattered training of young men and women in medicine certainly points to the need of more well-equipped central medical schools.

MEDICAL STATISTICS FOR 1903.

Location.	Physician.	Mission.	Native Assistants.	Beds.	In-patients.	Dispensary Patients.			Out-Calif.	Country.	Operations.
						New.	Old.	Total.			
Canton	Swan, Todd	A. P. M.	8	300	1,814	.....	.....	25,399	400	.....	2,501
Changteh	Logan	Cum. P.	1	15	73	3,094	2,678	5,772	34	.....	134
Chaochow	Cousland	E. P. M.	1	92	700	3,272	7,870	11,142	197	218	431
Chianghoa (Formosa)	Landsborough	E. P. M.	.....	60	770	8,220	13,653	21,873	176	312	1,094
Chinanfu	Burnham	A. P. M.	1	12	62	1,146	2,125	3,271	90	425	35
"	Neal	"	2	30	146	3,659	4,084	7,743	241	.....	100
Chinkiang	Cox	C. I. M.	3	15	100	.....	.....	6,000	.....	.....	100
Chucheo	Osgood	F. C. M. S.	1	10	120	1,359	1,467	2,826	.....	.....	88
Fancheng	Hotvedt	H. S. M.	1	25	71	.....	.....	2,452	.....	.....	77
Foochow	Lyon	M. E. M.	1	60	.....	.....	.....	8,000	1,356	.....	.....
Hankow	Gillison and McAll	L. M. S.	.....	55	.....	3,232	3,355	6,587	12	.....	379
"	Hodge and Booth	W. M. S.	12	62	390	2,389	1,071	3,460	38	.....	334
Hanyang	Huntley	A. B. M. U.	1	28	132	1,989	2,923	4,912	100	.....	167
Hiaokan	Fowler	L. M. S.	.....	90	337	4,379	11,600	15,979	.....	.....	600
Hwaiyuen	Cochran	A. P. M.	2	15	.....	.....	.....	1,803	19	.....	76
Hwanghien	Ayers	S. B. C.	2	50	.....	1,800	2,200	4,000	20	.....	50
Ichang	Graham	C. S. M.	2	50	279	3,068	4,503	7,571	.....	1,332	74
Ichowfu	Johnson	A. P. M.	1	18	60	4,663	4,780	9,443	40	.....	105
"	Fleming	"	.....	12	85	2,236	1,682	3,918	64	260	118
Jaocheofu	Judd	C. I. M.	.....	.....	.....	860	1,213	2,073	117	360	85
Kiating	Henberg	B. M.	2	40	60	3,791	6,225	10,016	50	300	487
Kieh yang	Bixby	A. B. M. U.	2	30	620	3,502	4,802	8,304	87	.....	434
Kiukiang	Stone	M. E. M.	9	24	205	5,311	8,043	13,354	285	.....	45
Laoling	Jones	E. M. M.	4	.....	59	9,520	7,256	16,776	.....	2,370	28
Lieuchow	Machle	A. P. M.	1	76	604	5,182	2,687	7,869	82	1,159	159
Ngankin	Macwillie	A. C. M.	1	33	291	1,724	4,345	6,069	90	.....	320
Pak-hoi	Hill	C. M. S.	1	240	731	8,375	20,937	29,312	750	1,881	1,224
Pangchuang	Tucker	A.B.C.F.M.	2	80	290	3,000	9,000	12,000	.....	.....	105
Shanghai	Jefferys	A. C. M.	6	56	866	.....	.....	27,482	75	100	785
"	Palmberg	S. D. B.	1	Statistics for	1902.	.....	.....	1,713	24	.....	.....
"	Lincoln	A. C. M.	1	St. John's	1,678	3,752	5,431	.....	.....	.....	.....
Shaowu	Bliss	A.B.C.F.M.	1	15	65	2,771	5,063	7,834	235	150	110
Siangtan	Vanderburgh	A. P. M.	1	(3 mos.)	11	217	.....	217	30	20	36
Siangyang	Sjoquist	S. A. M. C.	2	50	187	.....	.....	2,460	18	50	37
Soochow	Park, Fearn	M. E. S. M.	1	36	279	9,176	3,015	12,191	1,097	.....	330
"	Polk	"	1	24	181	4,858	1,846	6,704	250	1,015	229
Swstow	White	E. P. M.	3	228	1,328	5,134	21,426	26,560	308	76	632
Tainan	Maxwell	"	1	155	1,486	6,689	15,553	22,242	64	.....	846
Tsangchow	Peill	L. M. S.	4	50	353	2,960	2,825	5,805	.....	.....	455
Tsingkiangpu	Woods	S. P. M.	1	20	.....	4,938	5,339	10,277	50	.....	369
Tsouping	Peterson	E. B. M.	.....	28	80	4,236	4,568	8,804	.....	.....	.....
T'ungch'wan	Harris	F. F. M. A	1	6	20	751	2,108	2,856	59	.....	43
Tungkun	Kuhne, Ollp	R. M. S.	1	50	620	7,344	18,043	25,387	53	.....	1,729
Weih sien	Parks	A. P. M.	.....	30	84	1,747	713	2,460	123	.....	39
Wenchow	Plummer	U. M. F. C.	2	45	578	.....	.....	10,119	.....	.....	189
Wuchang	Davenport	L. M. S.	2	45	382	3,000	4,000	7,000	.....	.....	192
Wuhu	Hart	M. E. M.	1	65	787	3,548	4,199	7,747	1,155	.....	438
Yeungkong	Dobson	A. P. M.	1	28	219	2,638	3,539	6,177	37	.....	216
Totals				2,453	15,525	147,477	224,485	457,390	7,826	10,028	16,025

Correspondence.

In issuing the Report for the past year we desire *Report of the* in the first place to *C. C. M. M. A.*, acknowledge God's goodness in giving us all a year of peace and prosperity.

The year has been uneventful, but the meetings of the Society have been well maintained and of great help to its members. The presence of Dr. S. R. Hodge, and late of Dr. Mary Glenton, have been missed from our midst. On the other hand, the Society has been strengthened by the return of Dr. Agnes Cousins.

In all twelve meetings have been held; every third meeting being clinical. The average attendance has been five and a half. Mrs. Dr. Gage and Dr. Beam, both of Hunan, have been the only visitors welcomed at any of the meetings.

Papers have been read, or discussions taken place, on the following subjects, viz. :—

Plastic Surgery.
Urinary Calculi.
Eczema.
Tropical Sanitation.
Out-patient Gynecology.
Diseases of Ribs and Sternum.
Recent Advances in Malaria.

From the large and interesting amount of clinical material shown may be mentioned :—

1. Popliteal aneurysm, which was subsequently cured by ligature of the superficial femoral.
2. Occluded brachial artery, possibly consequent on a gun injury.
3. Lead palsy.
4. Diabetes mellitus.
5. Peliosis rheumatica.
6. Hydrops articulari.
7. Polypoid growths in rectum.
8. Web thighs consequent on a burn.

9. Anterior dislocation of the head of the radius, of many years standing, admitting of good flexion.

10. Mycoid sarcoma of the head of humerus, measuring 27 X 26 inches in circumference. Good use of hand still existed.

11. Extensive keloid following on a cue.

12. Pathological specimens, viz. :—

(a) Urinary calculi, the largest removed by suprapubic operation, weighing four ounces.

(b) Malarial parasites.

(c) Cystic fibroma with calcifying walls.

(d) Osteo chondroma of the fifth toe, removed from a woman's foot after eight years' growth.

(e) Right lower jaw removed for mycoid sarcoma, etc.

Some progress can be reported towards the completion of nursing book: The manuscript is in the hands of the Chinese editor, and we hope it may be completed before long.

The Executive Committee endeavoured to arrange another medical conference at Kuliug during the summer. Owing, however, to the fact that most of those who were asked to read a paper were unable to do so, the suggestion could not be carried out.

At the last meeting of the Society farewell was taken of Dr. Davenport on his departure to Shanghai. A chaste and beautifully worked silver inkstand and match box-cover were presented by the members of the Society, accompanied by speeches expressing good wishes and esteem from both donors and recipient.

(Signed),

P. L. McALL, *President*.

C. J. DAVENPORT, *Secretary*.

EDITORS JOURNAL: Recently this question came to us again for decision while at Kuling when one of our mission had

What shall we do with a Fellow-worker who has Appendicitis? a sharp attack of this disease.

Anxious to know the opinions of the physicians on the mountain at that time, I sent out the following letter:—

"Owing to Rev. Mr. Jenkins, of our Mission, having recently had an attack of appendicitis, I desire for the benefit of the patient, our Board of Missions and for my own guidance, the opinions of the physicians at Kuling as to what is the best course to pursue.

In the writer's opinion, the questions that confront us are these:—

1. Should we pursue the 'expectant' plan, hoping that the patient will have no further attacks?

2. Should the patient be operated on by some surgeon in China during the interval or quiescent stage of the disease?

3. Should he be sent to the home land to be treated by experts?

I may add that in all probability the present attack is the first, and that it is in the writer's opinion a case of acute catarrhal appendicitis without pus formation.

The blood count ran as high as 16,000, the pulse 112, and the temperature 102.2 (axillary). There was a very slight dullness in the right iliac region.

A reply at your earliest convenience will great oblige".

Sixteen replies were received, which may be classified as follows:—

a. Would advise sending patient to the home land for operation as soon as he recovered from the first attack 2

b. Would advise sending patient home if recovery is not complete from first attack or in case he had another attack 7

c. Would advise operation in Shanghai during the quiescent stage 4

d. Would advise operation in Shanghai in case of another attack or if patient does not completely recover from first attack 1

e. Would advise "expectant" treatment with especial care for diet and exercise 2

Total 16

The writer desires to place himself on record as in favor of sending the patient home for operation during the interval.

It is interesting to note that of the seventeen physicians who gave opinions, three have had the disease. One had an abscess form during the first attack. This abscess pointed in the right iliac fossa and was opened in Shanghai. One had two attacks eight years ago, which were treated medically with no subsequent attacks. One had an abscess form with the third attack, which burst into the bladder and rectum and was finally drained through the perineum by Drs. Gillison and McAll, of Hankow. After an apparent recovery another attack followed, which incapacitated the patient more than a month, ending with discharge of pus by the rectum.

The nationalities of the physicians whose opinions are given are as follows:—

Scotch	...	...	...	...	1
English	...	...	...	...	5
Canadian	...	...	...	...	1
Norwegian	...	...	...	...	1
American	...	...	...	...	8

Total 16

Of the sixteen, four are lady physicians.

This collaboration is sent the JOURNAL at the request of several physicians who were at Kuling this summer.

O. T. LOGAN.

Changteh, Hunan.

EDITORS JOURNAL: I think perhaps some of your *Useful* readers would be *Accessories*, thankful to hear of one or two things that I have found very useful.

1. Eye ointments in compressible tubes.—I saw them first in use at the Royal London Ophthalmic Hospital during my recent furlough. A little reflection will at once convince of the advantage and handiness of these, especially when the expensive drug atropine is being used. They can now be ordered from any wholesale druggist. I would suggest asking for the tubes to be colored variously according to their contents. It is far more convenient.

2. When at Wuchang I saw Dr. Davenport preparing his own gauze. I bought very cheap gauze at Hankow and do the same. It supplies a very useful dressing at a very low figure (comparatively). I bought what is called "5 kin iang peh sa pu (5 lbs. foreign white gauze). Cut into strips of about two yards. After soaking in different waters for a day or two and thoroughly washing, it is boiled in a weak solution of *sod. bicarb.* Afterward soak in *perchloride of mercury* solution and dry in the sun. Wind up in rolls and store.

3. I have bought cheap instruments from the Surgical Instrument Co., Tha., Inn Holborn. Such instruments as I have tried, have given satisfaction.

J. W. HEWETT.

C. I. M., Lan-cheo.

The following letter has been handed to the JOURNAL by the Hon. John Goodnow, Consul-General for U. S. A. :—

TEMPLETON, CALIFORNIA, }
October 10th, 1904. }

AMERICAN CONSUL,
Shanghai, China.

DEAR SIR: Years ago while in China as a medical missionary I promised some of my fellow-workers that if I should recover my health on coming to America, I would be willing to go back some time and change places with some of them to give them the opportunity for recuperating that I have had. I am sure many need a change for a while. I have recovered and would be willing to spend a year or two over there. Have lost trace of most of the doctors I knew there, and know of no way to fulfil my promise excepting possibly through you, who probably know where they are located. It is indifferent to me what faith they profess. I am a middle-aged woman, a regular physician, and well located in a small town, but have been here a number of years and desire a change. This is a delightful climate, the country abounds in warm mineral springs of all kinds, so it would be a good place for any one who needs a change of work and climate.

Am sorry to trouble you with this, but I can think of no other person to refer the matter to. Will you kindly see that the message is placed in the hands of some one who would be interested. Kindly do so promptly, as I should like to hear from some physician there before seeking a change in this country. Thanking you in advance for your kindness, I remain,

Very truly,

Miss S. HELGENSEN, M.D.

Hospital Reports.

The first report of the Refuge for the Insane, Canton, China, comes to us too late for review in the October number of the JOURNAL.

The John G. Kerr Refuge for the Insane, as I believe it is now called, was the crowning work of the late lamented Doctor, whose name it bears.

The report covers the first three years of the institution's life, from February, 1898, to August, 1901, and was begun by the Doctor himself with a sketch of the history of the work and personal notes of those who have been cured there.

The second half of the report contains accounts of the life and character of Dr. Kerr by those who know and loved him. He was indeed a remarkable man in the right place, and it is little wonder that his memory is so revered among the people for whom he did so much.

The leading article in this issue of the JOURNAL, by Dr. Selden, his friend and successor, naturally covers much of the field outlined in the report.

The refuge has quarters for patients of both sexes.

It is indeed to be hoped and prayed for that in time other institutions of this class may be founded, either by foreigners or still better by the Chinese themselves, to care for this long neglected and much abused class of patients.

The Refuge for the Insane in Canton has been established for three years, and over 100 insane persons have been admitted.

There are now forty-one patients, of whom eighteen are women. Most of these pay for their food, but a number are dependent upon the Institution for support.

In extending the Refuge and enlarging its usefulness, there are certain needs which must be supplied as the funds are forthcoming:—

1st.—Funds are needed for the support of poor patients. \$40.00 in silver will maintain one for a year.

2nd.—Funds are needed for improvement of recreation grounds for making walks and covered gallery for exercise in bad weather.

3rd.—A third building is required which will cost, with filling in the ground, \$5,000.00.

Contributions for these purposes will be thankfully received and faithfully applied.

The annual Report of St. Luke's Hospital for the year ending September 15th, 1904, shows a steady increase in the demands upon the institution. The new building is now open and thereby increases the ward spaces. A description of the new building and an account of the dedication will be found elsewhere. The hospital is unfortunate in being deprived of its surgeon in charge for a time, but his work is being carried on by two of the local surgeons—Drs. Reid and Jackson—who have always been willing to help the hospital in times of need. The return of Dr. Jefferys within the present year is confidently expected.

The first Report of the Tsing-kiang-pu hospital shows that there, as in other stations, the Southern Presbyterians are doing their usual unostentatious thorough-going work.

"In the spring of 1902 the hospital property was bought. During the summer and autumn of that year the physician's residence and ten rooms for the hospital were built on adjoining lots. At the same time the other buildings were repaired. In December, 1902, the first patients were received, the beginning of the first year's work of the hospital.

There are ten beds on the men's side and twelve beds on the women's side, with the addition of the private rooms on each side. A total therefore of twenty-four beds. Male patients find accommodation in two wards about 16ft. x 35ft. each; the female patients in three smaller wards. The buildings are all Chinese style, one story, built around courts, with foreign windows and doors. The arrangement is similar to the pavilion plan now so much in favour in Western lands, and lends itself readily to thorough ventilation, sanitation, and if necessary to isolation. An adjoining lot furnishes space for the erection of two wards and four private rooms; these it is proposed to build during the coming summer. When completed there will be beds for thirty men and twelve women.

The work for 1903 has been encouraging, though many perplexing and some discouraging problems have had to be met. The dispensary work has grown, and is more satisfactory, as more patients return for second treatment.

During the year 10,277 patients have been treated, of whom 4,938 were first visits. The afternoons are given to the out-door clinic, and while waiting their turn the patients are in the chapel, where either Mr. Graham or Mr. Rice preach. Mrs. Rice meets the women patients in their waiting room. When it is remembered that at least one friend accompanies each patient it will be seen what a large

number come under the sound of the gospel.

The mornings are taken up with treating the in-patients, performing surgical operations and visiting professionally the homes of the people. An hour each morning is spent in teaching a medical student, Mr. Hsü. He is a Christian, is working steadily and is becoming more efficient as an assistant. Seventy-five patients have been treated in the hospital, of whom fifty-eight were men and seventeen women.

Owing to the doctor's illness and other causes no in-patients were received from June 1st to November 1st. The in-patients were chiefly surgical.

Twice a week, on Tuesdays and Fridays, the dispensary at Whai-an-fu is opened. Whai-an is ten miles from Tsing-kiang-pu, the prefectural city, and a place of great importance.

During the past year well-to-do patients have been afforded an opportunity to contribute to the support of the hospital, and all operative cases, except among the poor, expected to pay something. It is a pleasure to record the willingness many have evinced, showing their desire to make some return for benefits received. Some \$300 have thus been received from patients.

There are many problems to be met and solved. The lack of trained native helpers, nurses, and students is a drawback. As it is, much routine work must be done by the doctor himself, which could be as well done by students and leave time for much diagnostic and other methods which require much painstaking care. There is great need for earnest natives to teach the patients in the wards and follow them up in their homes. The hospital kitchen, the hygiene, and sanitation of the hospital, keeping wards clean and wholesome, with unskilled and untrained help, is

a great task. Still this will all be solved in time, and we look forward with encouragement to the future.

The hospital affords the best opportunity to effectively relieve bodily suffering, to bring the gospel to the soul, and to so get in touch with the people as to get a hearing for the truth. The range of its usefulness grows wider each year. It is asked that all who read these lines will pray for God's blessing on this work done in His name and for His sake."

The new hospital, Pao-ting-fu, *New Hospital, in the American Presbyterian Mission compound, was*

formally opened on Tuesday, 4th October. The general exercises in the chapel were followed by an inspection of the new buildings and feasts provided for the officials, resident foreigners, and about a hundred of the leading men of the city. Nearly all of the superior officials, civil and military, were present in the chapel. Tao Tai-ch'ien, the Chinese Director of the University, offered a short address of congratulation and appreciation. A small honorary gateway with a tablet had already been erected by Chinese contributors. The tablet reads 思羅醫院 (In Memory of Dr. Taylor Hospital). Of the sum used in building and equipping this fine hospital plant, 3,500 gold dollars were given by Dr. Taylor's classmates of Princeton University, of which Mr. Charles Denby, of Tientsin, is a member. The wards were given by Mr. E. B. Sturges, of Scranton, Pa., and the hospital equipment by Dr. B. C. Atterbury.

On Wednesday, November 2nd, the new medical college erected by the Canton Medical Missionary

Society was formally opened. To those acquainted with the history of Christian missions in China it is hardly necessary to say that this new advance is the fruit of the consecrated labours of Drs. P. Parker, J. G. Kerr, and J. M. Swan, who have succeeded each other as superintendents of the Society's hospital during the past sixty years.

The opening ceremonies were divided: Chinese function taking place in the afternoon, while the foreign community gathered in the evening. This arrangement was rendered necessary, as seating accommodation was inadequate for the united gathering.

The new building is three-storeyed, and is situated on the river shore almost in front of the superintendent's residence, and thus in close proximity to the hospital. The valuable site was given by the Chinese government. The college is strongly and neatly built of red brick, with verandahs surrounding each story. An observatory crowns the top (a gift from the Parsee community in Canton), which commands one of the most extensive views of the city obtainable. The money for the erection of this plant has come from varied sources, representatives of many nationalities contributing, but it is surely gratifying that the committee can record the fact that the larger half of the cost has been borne by the Chinese themselves. This speaks louder than any words can do the appreciation of medical missionary work by the Chinese.

At the Chinese ceremony the American Consul-General, Mr. F. B. Cheshire, presided, and a large number of officials and representative Chinese were present. The governor of the province, the Nam-hoi magistrate, the Tartar-General, and a representative from the Viceroy were there to show their sympathy with the institution. In replying to Mr. Cheshire's address of welcome one

of the officials said that the work in connection with the Medical Missionary Society's hospital had done more than anything else to remove prejudice and cement the goodwill which now united the representatives of foreign nations with the Chinese in Canton. Revs. Dr. Noyes and Dr. Simmons addressed

the gathering, as men intimately acquainted with the history of medical missions in Canton, while Rev. C. Bone spoke of the advantages that would spring from the institution.

[A picture of the new building is in front of the October, 1904, number of the MEDICAL MISSIONARY JOURNAL.—ED.]

THE SITUATION IN MANCHURIA.

INTERESTING LETTER FROM DR. D. CHRISTIE.

MOUKDEN, *December 8th, 1904.*

MY DEAR COUSLAND: Forgive me for not answering your letter sooner. The fact is that during the past three months I have been simply overwhelmed with work, and were it not that I am to-day confined to the house on account of a sore throat, I fear my silence would continue.

The black hand of war has been working ruin and desolation round us here. Scores of villages have been levelled to the ground and thousands of men, women, and children have been flocking into the city; their crops destroyed, their houses wrecked, their furniture used for fuel, their personal belongings stolen or lost, and not a few of them sorely wounded. It is no exaggeration to say that thousands of farmers, who a few months ago were in comfortable circumstances, are to-day reduced to poverty and despair. But one feels most of all for the homeless and helpless women and children who gather daily round our gates begging for food and shelter; their scanty, ragged clothing giving but poor protection against the severe cold which is now upon us. The International Red Cross Society, with our old friend Mr. Webster as Hon. Secretary, has been doing splendid work in relieving the distress all over the country. We have received a large share of help, and have now seventeen refugees, where 7,200, chiefly women and children, are fed and housed. The Chinese viceroy has also been actively engaged in the good work, and a larger staff of native officials have about 20,000 under their care. We have been working very harmoniously together, and I am greatly pleased with the thorough way in which they are carrying on the work. In addition to the above numbers, at least as many more have been received into the homes of friends or relatives in the city.

After the last great battle the wounded Chinese began to arrive, and for some time our strength was taxed to the utmost. They continue to come in twos and threes, and our hospitals are full. There is also a great deal of sickness among the refugees, but Dr. W. A. Young is now with me, and his ready help makes a great difference.

The regular medical missionary work has gone on steadily in spite of all this turmoil. Even when the great battle was going on the number of patients continued to increase. The government officials have always been friendly to our medical work here, and our present troubles

have brought us closer than before. The other day I received one thousand dollars from the viceroy for our work, and the governor and heads of the five Boards have followed with handsome subscriptions. When this storm is over, we look for the return of bright and prosperous days. But the clouds are still black. Heavy firing is going on this morning ten miles to the south of us. The next great battle, which is expected soon, will have its awful tale of bloodshed to tell. It is a source of great comfort and strength to us to know that so many are praying for us during these troublous times. I trust you are all well, and that your work continues to prosper.

With kindest regards,

Yours very sincerely,

DUGALD CHRISTIE.

Personal Record.

BIRTHS.

At Kia-ting, September 25th, the wife of Dr. CHAS. W. SERVICE, C. P. M., of a daughter.

At Mien-juh, Szch'wan, October 4th, the wife of Rev. Dr. SQUIBBS, C. M. S., of a daughter, Amy Ellen Aylward.

DEATH.

Dr. G. KING, of the Peking Syndicate, formerly of the C. I. M., died of pneumonia in Hunan.

ARRIVALS.

At Shanghai, November 10th, Dr. and Mrs. C. F. ENSIGN, M. E. M., North China.

November 19th, Dr. MARY NEWELL, from America, C. I. M.

November 24th, Dr. H. N. CHURCHILL, C. M. S.

December 23th, Dr. GUINNESS, C. I. M., from England.

DEPARTURES.

October 12, Dr. MARY V. GLENTON, A. C. M., of Wuchang, for U. S. A.

December 21st, Dr. and Mrs. EDGERTON H. HART, of Wuhu, for U. S. A.



MEDICAL MISSIONARIES OF CHINA IN ATTENDANCE AT CONFERENCE 1905.

The
China Medical Missionary Journal.

VOL. XIX.

MARCH, 1905.

No. 2.

Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

THE CONFERENCE OF THE CHINA MEDICAL
MISSIONARY ASSOCIATION.

Morning Session. Monday, February 6th, 1905.

Present: Drs. Boone, Behrents, Broomhall, Butchart, Cousland, Cox, Davenport, Fitch, Ellerbek, Evaus, Graham, Goddard, Guinness, Kember, Hearn, Jones, Leyton, Lincoln, Myers, Maxwell, Neal, Osgood, Park, Palmberg, Reifsnyder, Shields, Taft, Venable, Wilkinson, Wittenberg, Woodhull, Worley, Worth, and some others.

The opening exercises were conducted by Dr. J. B. Neal. After the reading of the 103 Psalm, Dr. Boone closed with prayer.

Dr. Neal announced that in the absence of the incoming president (Dr. Christie) and the vice-president (Dr. Swan), it would be necessary to elect a chairman for the conference.

It was unanimously agreed, on the motion of Dr. Boone, that Dr. Neal be asked to take the chair.

Dr. Evans and Dr. Guinness were appointed as secretaries. The conference then proceeded to the election of new members.

The following were accepted as members:—

- Dr. Hugh H. Weir, M.B., M.R.C.S., L.R.C.P., S. P. G., *Chemulpo, Corea.*
- Dr. Gertrude Taft, University South California, M. E. M., *Chinkiang.*
- Dr. James M. Wright, Kansas Medical College, Ref. Ch. in Am., *Tak-hing-chau.*
- Dr. Leyton, Foreign Christian Mission, *Nanking.*
- Dr. Ellerbek, Danish Lutheran, *Manchuria.*
- Dr. Broomhall, *Tai-yuen-fu.*
- Dr. Jones, Wesleyan Mission, *Ningpo.*
- Dr. R. T. Shields, Southern Presbyterian, *Kashing.*
- Dr. P. T. Evans, Jun., Southern Baptist, *Yangchow.*
- Dr. C. F. Mills, *Shanghai.*

Dr. Boone introduced three Chinese visitors—Dr. Kyong, Dr. Dan and Dr. Siau. They were elected to corresponding membership during the conference.

This was followed by the reading of the president's address of Dr. Christie, which contained a number of important suggestions. It was moved that Dr. Christie's paper be referred to a committee of three, who should prepare and present to the conference resolutions in harmony with the president's suggestions.

The chairman appointed Drs. Osgood, Butchart, and Worth as the committee.

The general editor, Dr. Lincoln, made a report on the JOURNAL. By motion this report was referred to the Committee on President's Address.

The Report of the Treasurer and Secretary, Dr. Booth, was presented, showing a balance of \$506.36. This report was also referred to the Committee on the President's Address.

The reports of the committees appointed by the conference of 1890 were then presented and were accepted. They were :—

1. A committee to prepare a tract in English upon the treatment of the opium habit.

The report was given by Dr. Boone.

2. The second was for the purpose of collecting information on the Chinese 'materia medica.'

Reported by Dr. Park.

3. To draw up an appeal to the home Boards urging the appointment of two medical missionaries to every large centre.

Dr. Woodhull reported. After discussion on the report, the following motion was voted :—

That the Medical Missionary Association of China reiterates its opinion stated fifteen years ago that at least two qualified medical persons should be stationed at each large hospital.

A motion in regard to language study was made by Dr. Wilkinson and seconded by Dr. Venable.

In order that the newly appointed medical missionary may be able to properly acquire the language and at the same time keep in touch with medical work, we recommend to our Boards that all medical missionaries, when first sent out, be instructed, if practicable, to take up residence at some large medical station for at least one year for the study of the language before being sent to their station for work.

Dr. Cousland then presented the Report of the Medical Nomenclature Committee.* It was decided that this valuable report be referred to a committee.

* See page 53.

Dr. Neal then read a paper on "The China Medical Missionary Association."*

After a discussion this was referred to the Committee on the President's Address.

The session closed with the reading of paper on "Tuberculosis of Joints," by Dr. J. H. McCartney, of Chungking. It was listened to with interest.

Afternoon Session. Monday, February 6th.

Dr. Neal occupied the chair. The name of Dr. Bchreuts was proposed for membership and accepted.

It was then moved and seconded that the conference go into a "Committee of the Whole" to consider the proposals brought out in the president's address and the other matters which had been laid before the committee of three chosen at the morning session.

Dr. Park was elected chairman of the Committee of the Whole.

Dr. Neal proposed that—It be *resolved* that we (The Medical Missionary Association of China) have heard with great satisfaction of the formation of Union Medical Colleges in Peking, Canton, and Shanghai, and of plans for such a school in Central Shantung, and that we urge the various missions working in China to use their utmost endeavours toward the formation of such schools in other large centres.

During the discussion that followed, Dr. Davenport stated that he feared that it would be impracticable to establish such a school at Hankow.

Dr. Boone pointed out that though four-fifths of the Chinese medical students would require a course of medical instruction given in the Chinese language, there was an opportunity for teaching in English as well. For seven years he had trained his students in that language; the final examinations being conducted before the port doctors, who in some cases set the papers. Some of his students had gone to South Africa, being examined by a Board of doctors in Tientsin before they were accepted.

Dr. Park spoke of the new university buildings in Soochow and a new chemical laboratory with a professor of chemistry in charge. There was a thoroughly equipped X-Ray department with a qualified operator. This month English is to be used as a medium for instruction. A union medical school might be started there.

Dr. Neal's motion was seconded and unanimously adopted.

The second question brought before the Committee of the Whole had reference to the MEDICAL MISSIONARY JOURNAL.

* See page 61.

It was unanimously determined:

(First). That steps be taken to publish the MEDICAL MISSIONARY JOURNAL bi-monthly.

(Second). That a committee be appointed, of which the present editor shall be a member, which shall, during this conference, prepare a list of subjects for papers and ask missionaries present to pledge themselves to prepare a definite number of papers during the next three years. •

(Third). That we pledge ourselves to send our reports of hospitals and dispensaries to the editors annually. (Dr. Osgood.)

The committee selected to work with Dr. Lincoln, consisted of Drs. Davenport, Maxwell, and Fitch.

It was proposed that a committee be appointed to consider the whole question of the provision of medical text books and a medical journal in Chinese and report to this meeting of the Association. (Dr. Cousland.)

It was also proposed that :

It be *Resolved* that medical missionaries in Korea have the fact called to their attention that they are eligible for membership and that they be invited to enter the Association, and that medical men in the ports who are in sympathy with the aims of the Association, be invited to become honorary members.

It was also proposed that :

We favor triennial meetings of the Association hereafter, but that in consideration of the General Conference being planned for 1907 we vote to meet next time at the date of that conference, the exact time to be determined upon later. (Dr. Neal.)

The question of the Permanent Committee on Terminology, on the suggestion of Dr. Neal, was postponed.

It was proposed :

That it be *Resolved* that we favour the introduction of the *metric system* in addition to the old in the new text-books and that we express a strong hope that in future editions of older text-books this system be incorporated in the text, together with the old system. (Dr. Neal.)

Dr. Neal then resumed the chair, and the findings of the "Committee of the Whole" were presented to the conference and unanimously adopted.

The report of the Committee of the Whole, as a whole, was unanimously accepted.

To act with Dr. Lincoln and to solicit contributions for the JOURNAL, the following committee was appointed, according to the suggestion of the Committee of the Whole: Drs. Davenport, Maxwell, and Fitch.

The following were elected to serve on the Committee on Medical Text-books: Drs. Cousland, Neal, Venable, Park, Butchart, and Woodhull.*

* Dr. Mary Niles has been added to the committee.

Dr. Park then read a paper on "Opium Smoking in China."

The chairman announced that owing to the indisposition of Dr. Evans, it would be necessary to elect another secretary to take his place. The name of Dr. Osgood was proposed and accepted.

The meeting closed with prayer.

Tuesday Morning, February 7th.

The morning session was opened by Dr. Cox, of Chinkiang. "All hail the power of Jesus Name" was sung, in worship, and Dr. Cox read Ephesians iv, and led in prayer.

Dr. Evans then moved, That 'two years' be substituted for 'one year' in the motion that concerned the language study of the new medical missionaries. This was passed. The motion therefore reads:—

"In order that the newly appointed medical missionary may be able to properly acquire the language, and at the same time keep in touch with medical work, we recommend to our Boards that all new medical missionaries, when first sent out, be instructed, if practicable, to take up residence at some large medical station for at least two years for the study of the language before being sent to their station for work."

The Chairman appointed Drs. Butchart, Park, Venable, Wittenberg, and Woodhull as a committee to consider Dr. Cousland's report on the work of the terminology committee given the previous day.

Dr. Lincoln was unanimously elected as secretary and treasurer.

The need for certain amendments in the constitution was pointed out by the president. Upon motion the chair was instructed to appoint a committee to consider the question and report to this conference.

Dr. Watson and Dr. Lincoln were appointed.

Dr. E. I. Osgood then read a paper on "Abscesses and Ulcers."

Medical education was the next subject discussed. Papers by Drs. McAll and Gillison, of Hankow, were read by Drs. Cousland and Graham.

Dr. Siau, of Wenchow, discussed the subject of English teaching of medicine in a well written paper.

The morning session was closed with prayer by Dr. Goddard.

Afternoon Session. Tuesday, February 7th.

Dr. Broomhall led the conference in prayer.

The secretary read the minutes of Monday afternoon. After corrections they were adopted as read.

Dr. Boone expressed a desire to conduct the visiting delegations through St. Luke's Hospital and medical school. It was proposed that we accept Dr. Boone's invitation with thanks and visit the hospitals at 4 p.m. Wednesday.

Dr. Lincoln gave an invitation to visit St. John's College.

Discussion of the papers on Medical Education was opened by Dr. Cousland, who read resolutions proposed by Drs. McAll and Gillison.

Moved and carried, That these resolutions be referred to the Committee on Text-books.

The first paper of the afternoon was read by Dr. Wilkinson, of Soochow, on "Diphtheria."

Dr. J. M. Swan, of Canton, had prepared a paper on "Operative Methods for Urinary Calculi," which was read by Dr. Goddard.

Dr. Plummer, of Wenchow, sent in the report of two cases: one on Liver Abscess and the other on Gangrene of the Foot. Dr. Evans read them before the conference.

Wednesday Morning, February 8th.

The opening exercises were conducted by Dr. Osgood. Half a dozen brief prayers were then offered by different members present.

After the reading of the minutes Dr. Boone rose to intimate that Mrs. Boone would hold a reception for all medical missionaries present and their wives. The reception to be from 8 p.m. to 10 p.m., this evening.

Dr. Cousland drew attention to the display of medical literature in Chinese on a side table, and said he would be glad to give explanation about the various books and their uses.

Dr. Neal drew special attention to the new Physiology brought out by Dr. Cousland. Orders for the same may be sent to the Presbyterian Press.

Dr. Butchart then presented the report of the committee chosen to consider the report of the Committee on Terminology.

The report is as follows:—

Your committee to consider the report of the Committee on Terminology would recommend

1. That we accept the report of that committee and express our thanks for the care used and effort put forth in their work, and that we recommend the discharge of the committee.

2. That the following members of the Association be constituted a new committee with power to fill any vacancies or add new members: Dr. Cousland, (chairman), Dr. Neal, Dr. Ingram, Dr. McAll.*

3. That the Medical Missionary Association request the Educational Association to finish promptly their work on the Nomenclature of Physics and Organic Chemistry and publish a standard list of these terms, and that we ask the chairman of the Committee on Terminology to write a letter to them explaining this action.

* Dr. G. A. Stuart has been added to the committee.

4. That we request the chairman of the Committee on Terminology to write to the Educational Association and the Diffusion Society urging the arrangement of one standard syllabary of characters for use in transliteration and request them to prepare biographical and geographical names.

5. That we request the Educational Association and the Diffusion Society in their publications to use the medical terms of the China Medical Missionary Association's list.

At the conclusion of the report Dr. Butchart expressed thanks for the splendid work done by Dr. Cousland and Dr. Neal on the Terminology Committee which, apart from their labour, could never have reached the position it has.

The report of the committee was then accepted as a whole.

Dr. Cousland then presented the report of the Committee on Medical Publications in Chinese.

It was decided, on motion of Dr. Butchart, to take up this report *seriatim*.

Section 1 of report had reference to the production of a standard series of text-books in Chinese.

Dr. Evans asked the meaning of the words "The Association to undertake the publication of."

Dr. Butchart, in his reply, referred to the confusion produced by the use of different terms in the various books produced by societies or individuals. The idea of the committee is that there should be a standard set of terms in use, and that authors be urged to employ these.

The books published by the Association would be the property of the Association. The Educational Association or the Presbyterian Press would doubtless publish these books, but if the Association undertakes the publication of its own books, it will be able to control them, and any profit accruing from such publication could be used for publishing more works.

Dr. Cousland stated that from \$300 to \$600 would purchase a book. We should only publish as many as the funds in hand would permit.

Dr. Park pointed out that the profit on the sale of books would come with the publication of the second edition.

Dr. Cousland.—Requests might be sent to the home medical missionary societies for a grant for the special end of publishing a uniform series of text-books. The work would subsequently become self-supporting.

Dr. Evans raised the point as to the advisability of putting the whole of the surplus under the control of the Association for publishing purposes; he felt it would be more business-like to reserve a definite proportion.

The first section was put to the meeting and passed.

Section 2. It was moved and adopted that the Publication Committee be appointed as read.

Section 3 had reference to the disposal of the surplus funds.

The question was carefully discussed, and it was finally agreed that only four-fifths of the surplus be put at the disposal of the Publishing Committee.

The adoption of the report of the committee as a whole was then put to the meeting. Amended it reads as follows :—

(1). We recommend to the Association that it undertakes the publication of a standard series of text-books in Chinese, and when practicable a Chinese medical journal.

(2). That a Publication Committee be appointed, composed of the following members: Drs. Cousland, Swan, Gillison, Davenport, Wittenberg, Park, Butchart, Venable, and the editor of the CHINA MEDICAL MISSIONARY JOURNAL, *ex officio*, with power to fill vacancies and add to its numbers if necessary.

(3). That of the surplus funds of the Association now in hand and at the end of each year, four-fifths be at the disposal of the committee, which shall also be empowered to raise funds by voluntary subscription for its work; such funds to be paid into the treasury of the Association.

Dr. Davenport then read a paper on "The Missionary Side of our Work."

The Rev. Dr. Evans closed the discussion with prayer.

Dr. Boone then read a valuable paper on "Malta Fever in China."

Dr. Lincoln read his paper on "Medical Work among Children."

The morning session was brought to a close with prayer.

Wednesday Afternoon, February 8th.

Dr. Ellerbek led in prayer.

Committee on Changes in Constitution made their report:

IN BY-LAWS:—No. 1. The word "triennially" is inserted.

No. 8. The first two sentences are cut out and the latter reads: "Yearly dues shall be three dollars, in advance, including subscription to the JOURNAL."

No. 9. The order of business will be as follows:—

- I. Calling the roll of members.
- II. Reading of the minutes.
- III. Election of new members.
- IV. Report of committees and officers.
- V. Unfinished business.
- VI. Written communications and discussions thereon.
- VII. New business.

No. 11. The article will read: "These By-laws may be altered or amended by a three-fourths vote at a regular meeting."

The CONSTITUTION is amended as follows:—

Art. II. The objects of the Association shall be:

First.—The presentation of the Gospel through the art of healing amongst the Chinese.

Second.—(a). The cultivation and advancement of the science of medicine in general.

(b). The imparting of a knowledge of it to the Chinese.

Art. IV. The words "and the East" are inserted after "China."

Art. V. The word "biennial" is changed to "triennial."

Moved and carried that the report be adopted.

Moved and carried that we request the present officers of the Association to continue in office till 1907.

(For other minor changes see revised constitution.)

Moved and carried that the secretary be instructed to print the revised constitution and By-laws and enclose a copy in the next number of the Association journal.

A communication from Dr. J. M. Swan, of Canton, was read to the conference, expressing regret that he could not be present.

Dr. Venable, of Ka-shing, presented a paper to the conference on "Symptomatology and Treatment of Digestive Disturbances."

It was moved and carried that the papers in hand be read first and discussion be reserved till the close.

Dr. Maxwell, of Tainan, presented a peculiar tumor taken from the face of a woman and read a paper on the same.

Dr. Reifsnyder, of Shanghai, gave a paper on "A Few Remarks on Obstetrical Cases."

"Hernia and Fecal Fistula" was the next paper, prepared and read by Dr. Hearn, of Huchow.

Dr. Evans read a paper prepared by Dr. S. Cochran, of Hwai-yuen, on "Artificial Respiration in Opium Poisoning."

A paper by Dr. Ida Kahn, of Nan-chang-fu, on "Self-supporting Medical Work" was read by Dr. Goddard.

Owing to lack of time, it was moved and carried that Dr. Meadow's paper on "Successful Surgery" be read by title only, but printed in the MEDICAL JOURNAL.

Dr. Maxwell read a paper describing the sanitary work of the Japanese in Formosa and their plan of campaign against the plague.

Dr. Neal, after a few remarks upon the manner in which the conference has been organized and entertained, made the following resolution, which was passed:—

Resolved, That we heartily thank Dr. Boone for the efficient and successful way in which he organized this conference and for the kindness and hospitality he has shown the Association in allowing it the free use of the hall in St. Luke's Hospital.

This was seconded by Dr. Park and followed by a rising vote of thanks.

Dr. Boone spoke of the great importance of the work done by the Medical Terminology Committee, and said it was a great step in advance. He presented the following resolution :—

Resolved, That the thanks of this Association be tendered to the Medical Terminology Committee for the very able way in which they have performed their difficult task. That we fully appreciate the self-devotion and untiring energy which they have displayed and acknowledge the benefits which accrue from their work.

This was warmly seconded by Drs. Park and Wilkinson and carried unanimously by a rising vote of the Association.

On Dr. Watson suggesting that the names of the members of the committee be added to the resolution, the chairman referred to the work done by others, mentioning Drs. Stuart, Whitney, Morley, Gillison, Macklin, and Kerr, who had done so much on the preliminary work.

Dr. Boone then spoke of the 'home call' of several members of the Association who had been presiding officers—of Dr. Kerr, one of nature's noblemen, a man who had devoted his whole life, not to medicine and surgery only, but also to the cause of His Master; of Dr. Douthwaite, loved by all for his ability, energy, faithfulness, his high life and character. The conference ought not to close without on some way expressing its appreciation of these men.

The chairman spoke, approving the suggestion, and Dr. Boone called on Dr. Cousland to voice the feelings of the Association.

Dr. Cousland said they had hoped to arrange for a memorial service of some sort, but had not been able to do so.

Dr. Park moved to appoint Dr. Cousland a committee to prepare a minute on the members who had passed away since the last meeting fifteen years ago for publishing in the JOURNAL with the report of the conference. Motion was carried.

It was then suggested that some member of each mission send in to Dr. Cousland the names of its own members who had died during that period.

It was arranged for a photograph of the members of the Association present to be taken on Thursday morning at 9:30.

Dr. Cousland moved that the secretary and treasurer (Dr. Lincoln) be asked to send to the various mission boards copies of the two resolutions dealing with the location and work of the medical missionaries.

Dr. Lincoln reported that over \$400 had been subscribed by the members (of the conference) and friends present for the use of the Publication Committee.

Dr. Maxwell moved a vote of thanks to Dr. Neal for his efficient work as chairman, and also to the secretaries.

It was moved and carried that the president appoint a Committee of Arrangement for the proposed conference in 1907. The following members were appointed: Drs. Davenport, Butchart, and Venable. They will make all arrangements and announce the time of meeting in the JOURNAL.

At 4:50 the conference adjourned to meet some time in 1907. The doxology was sung and Dr. Boone offered the closing prayer.

Members and Visitors Present at the Second Conference

of the Medical Missionary Association of China.

American Baptist Missionary Union.

Name.	Station.
M. D. EUBANK ...	Huchow.
F. W. GODDARD ...	Shao-hing.
R. E. WORLEY ...	Swatow.

American Board Mission (Congregational).

KATE C. WOODHULL...	Foochow.
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American Presbyterian Mission. (Northern).

JAMES B. NEAL ...	Chi-nan-fu.
MARY E. FITCH ...	Soochow.
MARY AYER McKINNON	Shanghai.

(Southern).

R. T. SHIELDS...	Ka-sbing.
W. H. VENABLE ...	Ka-shing.
J. R. WILKINSON ...	Soochow.
G. C. WORTH ...	Kiang-yin.

American Protestant Episcopal Mission.

H. W. BOONE ...	Shanghai.
E. L. DAN ...	"
M. Y. KYONG ...	"
C. S. F. LINCOLN ...	"

American Southern Baptist Mission.

P. S. EVANS, Jr. ...	Yangchow.
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Basel Missionary Society.

H. WITTENBERG ...	Kia-ying-chow
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China Inland Mission.

G. A. COX ...	Chinkiang.
B. C. BROOMHALL ...	Tai-yuen-fu.
G. W. GUINNESS ...	Kai-feng-fu.

Church Missionary Society.

H. T. KEMMER ...	Hangchow.
Dr. COLE ...	Ningpo.

Church of Scotland Mission.

ANDREW GRAHAM ...	Ichang.
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Danish Lutheran Mission.

Name.	Station.
S. A. ELLERBEK ...	Manchuria.

English Baptist Mission.

J. R. WATSON ...	Ch'ing-chow-fu.
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English Presbyterian Mission.

P. B. COUSLAND ...	Chao-chow-fu.
J. L. MAXWELL ...	{ Tainan, Formosa.

English United Methodist Free Church.

T. K. SIAU ...	Wenchow.
J. JONES ...	Ningpo.

Foreign Christian Missionary Society.

JAMES BUTCHART ...	Lu-chow-fu.
E. A. LAYTON...	Nanking.
E. I. OSGOOD ...	Cho-cheo.

American Lutheran Mission.

O. S. BEHRENTS ...	Ru-ning-fu.
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Methodist Episcopal Mission.

(Northern).

ELLEN M. LYON ...	Foochow.
GERTRUDE TAFT ...	Chinkiang.

(Southern).

A. G. HEARN ...	Huchow.
W. H. PARK ...	Soochow.

Seventh Day Baptist Mission.

ROSA W. PALMBORG ..	Lieu-oo.
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Woman's Union Mission.

M. EMILY GARNER ...	Shanghai.
ELIZABETH REIFSNYER.	"

Unconnected.

ANGIE M. MYERS ...	Shanghai.
A. G. PARROTT ...	"

PRESIDENT'S ADDRESS.

DUGALD CHRISTIE, F.R.C.P., L.R.C.S.

I have to thank the members of the Medical Missionary Association for the honour conferred on me in electing me president for the ensuing year. I appreciate your kindness all the more because I feel that your choice has not been instigated by any special qualities of mine, but must have been inspired by the generous desire to bring into a closer bond of sympathy and goodwill a distant field, which during the past decade has passed three times through the trials of war.

I recognize that the honour carries with it duties and responsibilities, and I confess that what should be the greatest pleasure to me is somewhat marred by the feeling of my inability to do justice to the position in which you have placed me. This feeling is emphasized when I remember the able and energetic services of my predecessor in furthering the interests of the Association.

I exceedingly regret that the exigences of war will, I fear, make it impossible for me to attend the meetings in Shanghai in February. Distance from the centre, and difficulties of travel at certain seasons, are a serious disadvantage to those who live in Manchuria. Scattered as the members of our Association are over such a large area, others must feel this same difficulty, and a question which I think should be discussed by us is, how to bring our forces into a closer relationship and more in touch with things at the centre? Would it not be a good thing to follow our home method and form provincial or district branches of our Association all over China, with office-bearers and secretaries, who could be in direct communication with our secretary and with the editors of the JOURNAL? Besides the local advantages, reports of the meetings and transactions would help to link us more closely than we are at present.

United as we are in one common aim, and to a large extent in method, it seems to me that the time has come when we should present a more united front in dealing with questions of general importance. I shall mention one: The establishment of a central medical school or schools for the teaching and training of natives for medical missionary service*.

*It is quite possible that this subject has already been discussed in the pages of the JOURNAL, but owing to Boxer fires, and the irregularities of post, I cannot ascertain this.

I need not urge the importance of this work. It is apparent to all of us, and some have done and are doing splendid work in this direction at different mission centres. But does this multiplicity of effort not mean great waste of energy? Instead of having a large number of isolated schools, with one or two overwrought medical missionaries in each, struggling to impart the necessary knowledge to a few pupils, would it not be better to have two, or say three thoroughly equipped medical colleges, one in the south, one in mid-China, and another in the north? To these, promising young men could be sent by the various missionary societies, who would be responsible for their support while under training. With a representative educational or college committee, and a central examining board, the scheme could be worked as one. Details as to premises, equipment, and teaching staff can be arranged if we are unanimous in the matter.

Such a movement, which would prove such a blessing to this nation would, I feel confident, receive hearty support both from America and Great Britain. Thanks to the untiring labours of our Terminology Committee one of the leading difficulties in the way of teaching is being steadily removed; and through the efforts of some of our members, we shall soon be provided with reliable and modern text-books. But much remains to be done in this direction if we are to keep our trained assistants up-to-date in their profession. Alongside the work of teaching, it would be well if two or more of our best men could be set apart, or relieved of their ordinary work to the extent of enabling them to reproduce in good Chinese, some of our best medical works. In addition to these, a medical journal in Chinese containing the best that we have in our European and American papers, would be invaluable.

The above scheme would aim only at the higher medical education of the Chinese. To carry on our regular medical missionary work a lower order of assistants will also always be necessary. But the training of these, which would be largely practical, can be carried on at the various mission centres.

While we have reason to congratulate ourselves on the great advance that medical missionary work has made in China during the past twenty years, I feel sure that, by uniting our forces more closely in carrying on the work which lies before us, we would soon see greater things done in the name of our Lord and Master.

REPORT OF THE EDITORS OF THE CHINA MEDICAL
MISSIONARY JOURNAL.

By C. S. F. LINCOLN, M.D.

In the year 1902, the Association did Dr. Jefferys and myself the honor of electing us editors of its JOURNAL, and we have tried, with somewhat variable success, to get you out a JOURNAL worthy of the organization. You, who have followed the JOURNAL closely, know how much of the good work, both in matter and in illustrations, was due to Dr. Jefferys, and have noticed the change since he left. I am thankful to say that he will probably be back in September, we trust much improved in health and able to take up, with renewed energy, the work which he has so successfully begun.

As editor there are certain suggestions that I should like to bring before the Association for the improvement of the JOURNAL; and speaking for us both, we should be glad to receive suggestions or instructions from the Association, for we are but its servants, as to how it wishes the JOURNAL conducted, or any changes which it thinks ought to be made.

First in the Department of Medical and Surgical Progress, which is essentially for the purpose of extracting from our contemporaries the new and useful for transmission to our remote fellow-workers. At present only three sections are given: Surgery this past year supplied by Dr. J. B. Fearu, Medicine by Dr. R. T. Booth, and Dermatology by Dr. Woodhull.

Dr. Woodhull has expressed a wish to edit a department of Hygiene if some one can be found to take her present department. We formerly had notes on Eye and Ear, and on Gynecology and Obstetrics. These, I regret to say, lapsed before we took over the JOURNAL, and ought to be revived at once. We ought also to have a sub-department of Therapeutics, in which useful and available drugs, remedies, and methods may be discussed. This department especially needs a sane, level-headed editor who knows how to separate the wheat from the chaff.

Secondly, we want to know what all of you are doing, and every hospital or dispensary publishing a report is in duty bound to send a copy of it to the JOURNAL. Even though we cannot publish it in detail we can at least give a summary of your work, and will be glad to do so.

Also, all electrotypes of buildings or interesting cases which are not sent home ought to be put at the disposal of the JOURNAL.

It rests entirely with the members of the Association whether we rely on them for articles and reports of cases, or whether we draw on our more plethoric fellow-journals. In 1903 and in 1904 contributions were received from just twenty-three people, including the editors and heads of departments.

Now this is a deplorable state of affairs. Whether the indifference is due to sectional or national bias, mere neglect, or what Mr. W. S. Gilbert has called "spleen and vapors," or the Chinese call 氣, it is impossible to say. Be that as it may, the *esprit du corps* of the Association demands a more united support of our JOURNAL. The JOURNAL is not sectional or national, and is published solely in the interest of the work we are trying to do for our common Lord and Master on the lines in which He has called us.

The one gigantic, all-embracing, overwhelming need of the JOURNAL is the cheerful, loyal, hearty co-operation of its constituents, who are the members of the Medical Missionary Association of China.

SECRETARY AND TREASURER'S REPORT.

R. T. BOOTH, M.B., B.CH., R.U.I.

During the few months I have held the position of secretary and treasurer of the C. M. M. A. little or no work of any kind has devolved on me.

Last summer I received certain books from Dr. Beebe, the acting secretary. I presumed they were minute and account books, but to my surprise I found that two out of the three were blank and the third contained an incomplete list of the members of the C. M. M. A.

Subsequently I received from the Presbyterian Mission Press, Shanghai, a statement of accounts up to June 30th, 1904. I find, on communicating with the Presbyterian Mission Press, that as regards finances the treasurer (so called) is practically unable to control or manage this matter, as all payments are made and monies received by the Presbyterian Mission Press, Shanghai, and as for some years the treasurer has been away from Shanghai, he has had no voice in the control. I should suggest that the office of treasurer be done away with, and that the Presbyterian Mission Press accounts with the C. M. M. A. be submitted annually to an "Audit Committee" composed of members of the C. M.

MEDICAL NOMENCLATURE IN CHINA.

By P. B. COUSLAND, M.B., C.M.

In 1847 there was published in Hongkong the *Beginuer's First Book* in the Chinese language (Cantou vernacular), containing terms in anatomy, lists of diseases and medicines, and medical phrases in English and Chinese. By the Rev. T. T. Devan, M.D. 161 pages. Revised and enlarged in 1858, and a third edition printed in 1861.

In 1850 the first of Dr. Hobson's medical works was published in Canton, *An Outline of Anatomy and Physiology*, 99 leaves. In 1857 he issued his *Surgery*, in 1858 his *Practice of Medicine and Materia Medica*. Appended to this volume was a list of Medical Terms in English and Chinese. The same year he also published a treatise on *Midwifery and Diseases of Children*, and also, separately, a *Medical Vocabulary* in English and Chinese, 75 pages, Mission Press, Shanghai. Dr. Hobson's books were deservedly popular among the Chinese. They are still listed on the Presbyterian Press catalogue and still used by the Chinese. His *Vocabulary* was the one I found in use in Swatow on arriving there in 1883.

1864. *The Tourists' Guide and Merchants' Manual*, Dr. Lobscheid, Hongkong, containing all the known names connected with the sciences or natural history, chemistry, pharmacy, etc., compiled from all available sources.

1871. Dr. J. G. Kerr published his *Materia Medica* with a Glossary in English and Chinese, and in 1871 and 1872 he supplied the articles on classification of medicines and chemical terms in *Doolittle's Vocabulary and Handbook of Chinese*.

In 1876 there were issued Dr. Porter Smith's well known contributions to *Materia Medica*.

1878. *Anatomy*. Translated and compiled by Dr. D. W. Osgood, of Foochow, with *Vocabulary of Terms*.

1884. *Manual of Physiology*, by Dr. J. G. Kerr, with Glossary in English and Chinese.

1887. *Vocabulary of Diseases*, in English and Chinese. Compiled by Dr. J. C. Thomson, under Dr. Kerr's supervision.

1889. *Vocabulary of Medicines*, in English and Chinese. Compiled by J. C. Thomson.

1890. A Vocabulary of Anatomical and Physiological Terms, in English and Chinese, comprising over 5,000 terms, by Dr. H. T. Whitney, Foochow.

In addition to the preceding there must be mentioned Dr. Dudgeon's works on Anatomy and Physiology, with Vocabulary; Dr. Fryer's many translations of scientific works, his Chemical and Materia Medica Vocabularies, and his essay at the Shanghai Conference of 1890 on Scientific Terminology; Dr. Porter's Physiological and Psychological Terms; Dr. Hunter's well known Manual of Therapeutics and Pharmacy, and the Anglo-Japanese Medical Dictionaries published in Japan.

It is hardly necessary to say that with so many translators at work uniformity in the terms used became less and less conspicuous, and as the number of medical missionaries engaged partly in training students multiplied, the lack of agreement in the use of terms was increasingly felt as a most serious hindrance to the work, difficult and discouraging to teacher and pupil alike.

This survey brings us to 1890 when the first conference of this Association was held. At the conference Dr. Hunter, in the course of a paper on medical nomenclature, said: "If during this conference we shall be able to agree upon and adopt such a system of nomenclature in the various departments of medical science or provide for such a uniform system in the near future, we shall have taken a long step in advance of the past and conferred a real and lasting boon on all who come after us." Neither of these aspirations were realized, but the conference appointed a Committee (*absit omen*) on Medical Terminology, composed of the following members (I quote from the Conference Records, page 209) :—

J. G. KERR, M.D., *Chairman*.

S. A. HUNTER, M.A., M.D.

H. D. PORTER, M.D.

WM. WILSON, M.B., C.M.

A. W. DOUTHWAITE, M.D.

P. B. COUSLAND, M.B., C.M.

This then was the first step taken by the medical missionaries of China towards establishing a uniform and standard set of medical terms.

Committees are not a robust folk. They are peculiarly liable to sleeping sickness, pernicious anæmia, and various molecular degenerative processes. Or to vary the metaphor they are somewhat geyser-like in action or inaction, lying low for long periods with scarcely a subterranean gurgle to be heard, and erupting unexpectedly either spontaneously or in answer to the persuasive clod heaved timidly down such orifices as may promise the chances of a response.

This particular committee has erupted several times somewhat mildly, and twice with force and volume, once in brown and once in green, whether obscurantist and hurtful mud or pellucid water, the awesome silence of the bystanders has left undetermined.

Let me briefly trace the history and operations of your committee. In the first place, unfortunately, Dr. Wilson did not see his way to serve. In July, 1891, Dr. Hunter left for home and appointed Dr. Douthwaite to act as secretary during his absence. As Dr. Hunter did not return, the committee was thus deprived of the benefit of his experience. Subsequently death robbed us of Dr. Douthwaite and Dr. Kerr, and ill health of Dr. Porter, so that the writer of this paper is the only one of the original committee who is left, and the only one who was *not* present at the conference of 1890.

To fill the gaps as they occurred, the remaining members of committee appointed Dr. Whitney, of Foochow; Dr. Neal, of Chi-nan-fu; Dr. Stuart, of Nanking; and, last year, Dr. Gillison, of Hankow. Dr. Kerr appointed the writer of this paper to act as secretary, and after Dr. Kerr's death Dr. Whitney was chosen as chairman, so that the members now are: Dr. Whitney, chairman; Dr. J. B. Neal, Dr. G. Stuart, Dr. T. Gillison, and Dr. P. B. Cousland, secretary.

With his usual energy Dr. Kerr got to work at once and issued in 1894 a Vocabulary of Diseases (the subject allotted to him) and again a larger Vocabulary of the same subject in 1898, compiled by Dr. Wan Tun-mo. These were widely circulated, and have doubtless been used by almost all here.

After various delays, due to personal and committee ill health, the first meeting was held in the beginning of 1901, when the members present were: Drs. Whitney, Neal, Stuart, and Cousland, and the subjects considered were: Anatomy, Histology, Physiology, Pharmacology, and Pharmacy. A pamphlet containing lists of the chosen terms in these subjects was issued to each member of the Association.

The usual causes operated to delay another meeting until the beginning of 1904, when Drs. Neal, Gillison, and Cousland got together to decide on terms in Pathology, Medicine, Surgery, Obstetrics, and Gynecology, and to revise and amplify the lists issued in 1901. At this date of writing, December, 1904, a meeting is being arranged to be held before the conference meets, at which it is hoped terms in *Materia Medica* and Bacteriology will be selected for submission to the Association.

In addition to the vocabularies already mentioned, and the Japanese dictionaries, and to the lists drawn up by the members of committee,

valuable help was received from Dr. Morley and Dr. Machle. From Dr. McAll we received an exhaustive list of criticisms of the anatomical terms, and he and Dr. Ingram are practically the only members of the Association who helped us in this way.

Reference has been made to the Anglo-Japanese Medical Dictionaries. One would suppose that their terms would be first class and a great help to your committee. The reverse was found to be the case, and although we are indebted to them for some excellent suggestions yet on the whole their terms are disappointing.

With regard to chemistry, the Educational Association appointed a Committee on Technical and Scientific Terms, which began by taking up inorganic chemistry and inviting your committee to work with it. This, under Dr. Mateer's energetic chairmanship, resulted in the publication of a consistent and scientific nomenclature of the elements and their inorganic compounds, a nomenclature which, it is hoped, will be the standard for many years to come.

Organic chemistry presents a much more difficult problem, but it is expected that before long this subject too will emerge from darkness and chaos into a measure of light and order.

Physics also is a subject we are deeply interested in, and it is hoped that the work done by the Educational Association's committee and contained in the recently published Dictionary of Technical Terms will be still further elaborated and a standard set of physical terms agreed upon. The plan adopted so far of putting the preferred one first is extremely valuable as a step towards a standard list, but it is to be hoped it will be regarded as only a step.

In recent years a perfect flood of scientific text books has been poured forth, and judging by the lists given of books in preparation there are no signs of its abating. What is to become of them all it is hard to see, but it is not difficult to imagine the effect produced upon the students of China by this terminological medley. If it is in order I would dearly like to suggest that we request the Educational Association to invite the most exhaustive criticism of its list of terms in the physical sciences, and after carefully considering them to publish a standard vocabulary and then stick to it through thick and thin, only recognizing such text-books as will bring their terminology into line. Either this or we shall have to make a list of our own, publish a text-book specially adapted for our medical students and make it part of the curriculum, using these terms throughout all our medical text books. What we *must* have is a series of text-books with consistent terms throughout. We have been in bondage long enough; let us forth to

Canaan and let the Term Committee be our Moses and a Text-book Committee our Joshua.

And now as to the principles that guided us in our work. But first let me say that some, despairing of giving the Chinese a good scientific training through the medium of their printed language, ask what is the good of all this nomenclature work. Better far, they say, to insist on a good preliminary English education and use that language as the vehicle of a medical education. With this opinion I have no sympathy. Not, mark you, that I disapprove of Anglo-Chinese medical schools as here in Shanghai and in Hongkong—by no means—but I firmly believe that we can give the Chinese a thoroughly good education in medical or any other branch of science by means of their own language. In fact I think in some ways the Chinese student will have the advantage. The composition of a Chinese character conveys more to him than in many cases does a Western student's vague recollection of the Latin or Greek derivation of a medical term. Take the new names of the elements, the gases with the gas radical, the metals with the metal, and the earths with the earth radical, and the phonetic parts of the characters conveying either an appropriate meaning, as *light* for *hydrogen* or *yellow* for *chromium* or *sun* for *helium*, and only in the case of the rarer elements being reduced nearly to the level of such delightfully simple names as the Western Didymium, Germanium, and Ytterbium. In anatomy the Chinese student is spared the effort of remembering what part is meant when Eustachius' tube or Stenson's duct or Glisson's capsule is quoted, or what disease or symptom—and I am sure I touch a responsive cord here—is to be understood when the revered names of Hodgkin, Addison, Graves, Friedreich, Paget, Rokitsky, Rosenbach, Well, Werlhoff, and others, whose names I am afraid to undertake in public, not to mention thirty saints from St. Agatha, whose disease I need hardly tell you is mammitis, through St. Anthony and St. Vitus to St. Zachary, whose particular morbus is dumbness. It is interesting to notice that these saints are largely connected with epilepsy and chorea. Now I have to confess to you that chorea has rather floored us. All the same we have not been driven to name it the dancing disease and do not propose to call it by the name of any Chinese saint, and if we are obliged to transliterate it we shall convey as much or as little to the Chinese student's mind as chorea does on first hearing to the Westerner. Then too we can be warned by the mistake of Western nomenclaturists and avoid rash pathology and obsolete humours and the like.

The work was divided up among the members of committee, each being assigned a subject in which to prepare a list of terms. These lists were then circulated among the other members, so that when we met we were prepared intelligently to discuss the merits of the terms proposed. In preparing these lists the existing vocabularies and Anglo-Japanese dictionaries were consulted, and even hesitating plunges made into the dark sea of Chinese medical literature. Comparatively little was fished up. What can you expect of a nation that does not recognize its own pancreas and where a name does equally well for the humerus or ulna? I hope this point, the existence of a pancreas, will be brought under the notice of the reform party. Otherwise what chance has China of being admitted to the circle of civilized nations? One can get along without a stomach, but without a pancreas, never! In the Chinese names of disease we have met with various difficulties. In some the disease described was quite unrecognisable, in others the description covered several diseases characterised by similar symptoms, in others the name was applied to one symptom, in many it was too colloquial for our purposes. Colloquial names are all right for use in speaking to the patients, but are hardly suitable in seeking to construct a scientific and concise nomenclature.

Our first method then was to utilise existing terms.

When these were wanting or unsatisfactory we had the choice of four methods:—

1. Translate the foreign term, that is to say, make a descriptive term, using as few characters as possible, so that it would be a terse term and not a descriptive phrase. This of course is the ideal plan and in many instances is not difficult of execution. In others the foreign term is untranslatable or needs a long descriptive phrase.

2. Utilise the many obsolete or rarely used characters in Khang Hi's dictionary, a plan that has the sanction of so eminent a nomenclaturist as Dr. Fryer. Much research led to the discovery of characters whose composition or meaning enabled us to usefully and appropriately employ them. In my experience, Chinese medical students prefer a descriptive phrase or even a transliteration to the utilisation of an old character, because the last method means more characters for them to remember, but a little experience will soon show them the great advantage both in clearness and terseness in having technical terms represented by single ideographs.

3. Coin new characters.—This has been done somewhat extensively in naming the elements, and in some cases we had to fall back

upon it. I think your committee deserves great credit for its self-restraint in this matter. How fascinating to compile characters with suitable radicals and phonetics, conveying at a glance their meaning and leading themselves to scientific classification. How delightful it would be to group allied terms in anatomy, in physiology, in pathology, etc., under appropriate radicals. But wisdom and caution whispered No. Who were we, to constitute ourselves a Chinese academy and take liberties with these grand old hieroglyphics? Only in a few instances did we deem ourselves forced to fall back upon this method—as we hope to the enrichment and not embarrassment of Chinese philologists.

4. Transliterate or phoneticize the foreign terms.—Inasmuch as terms formed by this method convey no hint of their meaning to the student it has been employed as little as possible, but in some instances e. g., the names of vegetable materia medica products, it was our only way out of the difficulty. We sought to use as few characters as possible consistent with clearness, and so avoid the jaw breaking names in some of Dr. Fryer's and the geographical lists. What is urgently needed is a suitable standard syllabary of characters, so that from time to time new names can be transliterated according to a consistent code and the present confusion obviated. As illustrating this confusion, Mr. Darroch, in a recent paper on the present Chinese educational activity, quoted from a native biographical work where J. Watt appeared four times; the editor being so misled by the different ways the name has been transliterated as to make four individuals out of one. The Diffusion Society and the Educational Association have both been working at syllabaries and lists of biographical and geographical names phoneticised in accordance with these syllabaries. It is to be earnestly hoped that they will arrive at a joint understanding and not publish separate lists. It is not possible to choose characters that will suit all vernaculars equally well, but no doubt most of us will willingly, for the sake of uniformity, fall in with the selection of characters which most widely represents the Western sounds.

At this conference your committee is presenting to the Association lists of terms in all the subjects required in a medical curriculum. What is the next step to take? What is now wanted? *Criticism.* Criticism destructive and constructive. Criticise them by going carefully through the lists; criticise them by using them in teaching; criticise them by using them in translating medical books. The terms that survive such a three-fold process should live for many a year. It is with astonishment and regret that your committee has noted the dead

silence with which the publication and circulation of its first two lists has been received. Are they beyond criticism? You flatter us. We ourselves find many changes necessary. Is criticism of so many terms too large an order? It is a large order; yet send us some, every one may be of value. Let me emphasize that "*send us.*" Do not keep your criticisms to yourself or confide them merely to your nearest colleague, but let your committee have the benefit of them. So send them to us and send them *now*.

Further, I suggest that the Terminology Committee be continued or reappointed, not necessarily of course with the same membership. The work is by no means finished. The lists must be revised in the light of use and criticism. They must be amplified and, finally, a standard English-Chinese and perhaps a Chinese-English dictionary, with definitions in Chinese, must be published.

The committee should keep in touch with the Educational Association and Diffusion Society in such matters as other scientific terms, a phonetic syllabary, a biographical list, and also to urge that in school and college text-books our standard terms be used. We see with regret that in some recent physiologies some Japanese terms are adopted while ours are ignored. In view of the rising Japanese tide in China it is especially important that the missionary body bring this work of coding all scientific and technical terms to a speedy and satisfactory conclusion. "United we stand, divided we fall" in this matter as in others.

This Association may very probably appoint a Translation and Publication Committee, and I believe it would be wise to instruct this committee to require that its standard terminology be adhered to. Representations from translators should receive every consideration from the Terminology Committee, but no one should, on his own responsibility and without reference to the committee, depart from the Association's terms. It may often seem that the chosen term could be improved upon, but it must be kept in mind that terms are not like stones in a bag; they are rather links in a chain, and you cannot change one without affecting others. It is seldom of use to consider them individually merely; they must be taken in connection with their allied terms. And again terms that are suitable in one locality may be most unsuitable in other districts. So I appeal beforehand to all translators to consult with the committees and be loyal to their decisions. This is surely fair all round and is absolutely necessary to the production of the sorely needed uniform series of medical text-books.

THE MEDICAL MISSIONARY ASSOCIATION OF CHINA.

JAMES B. NEAL, M.A., M.D.

It was in 1886, nearly twenty years ago, that through the efforts of Dr. Boone and others, who were particularly interested in the matter, a vote was secured from the medical missionaries then in China favoring the formation of an Association and the publishing of a journal in its interests.

The Constitution in Article II says :—

The objects of the Association shall be—

First.—The promotion of the science of medicine amongst the Chinese, and mutual assistance derived from the varied experiences of medical missionaries in this country.

Second.—The cultivation and advancement of mission work and of the science of medicine in general.

Third.—The promotion of the character, interest, and honor of the fraternity by maintaining a union and harmony of the regular profession in this country.

The first number of the JOURNAL was published in March, 1887, and the first article in that number was by Dr. Boone on the future work of the newly-formed Association. From that article I may be permitted to quote a few sentences, which are just as applicable now as they were when written, nearly a score of years ago. Dr. Boone says :—

The medical missionaries of China have great cause for thankfulness that, by the recent election they have been brought into common bonds of union and sympathy. We are now in a condition to work together for the common good, to know and appreciate one another in a way we never have had a chance to do before. Our union will give us that *esprit du corps*, without which we can never do good work as a body, and our best efforts would be scattered and unsupported. In our quarterly MEDICAL JOURNAL, we have now, for the first time, an organ in which to express ourselves, to report upon our work, and to enable us to garner the constantly increasing mass of observations and experience for the good of our own body and of the world in general. It rests with us whether we shall show the world that we are doing work which will command respect and support, or whether, by our own supineness, we lose the opportunity which the publication of this JOURNAL places at our disposal.

After referring to a number of questions for discussion in the JOURNAL, some of which will come up for consideration during these meetings, the doctor asks the following heart-searching question, which might well be made the central thought of the present conference :

What have you found to be the best method of gaining the respect, the attention and the power to influence the Chinese around you, so that you say lead them to higher thinking and living than they have ever had any opportunity of attempting before.

With these few quotations from the constitution and from Dr. Boone's article as an introduction, may we not profitably ask ourselves how far our Association has accomplished the objects for which it was founded? and what improvements can we suggest for the coming years?

First.—What have we accomplished for the “promotion of the science of medicine amongst the Chinese?”

If this section of the constitution refers merely to the establishment of dispensaries and hospitals throughout the empire, then I think we may fairly say that this object has been accomplished as far as could reasonably be expected during the eighteen years' life of the Association. Our centres for healing are scattered over the length and breadth of the land, and while we have to acknowledge that an immense amount of territory still remains unoccupied, yet we may point with pride to the hundreds of thousands who every year obtain relief in our scores of dispensaries and hospitals and to the new places which are being opened up from year to year. Even the troubles of 1900, which for the time being were so disastrous, have resulted in finer buildings and in increased medical work in the disturbed districts. To anyone at all well acquainted with the development of medical work in China, the advances made during the past fifteen years are quite marked and very encouraging, even though so much does still remain to be done.

But in so far as “the promotion of the science of medicine amongst the Chinese” depends upon the establishment of regular medical schools and the careful training of medical men by means of systematic instruction, I fear we shall have to acknowledge that we have largely failed. In compiling the statistics of medical work sent in to the JOURNAL during the past year, the writer was much struck with the fact that nearly every medical centre in China was attempting to do medical teaching. Now, while we cannot but be glad that these scattered groups of young men are being taught something about rational medicine, and are being prepared to be something better than the native quacks, yet we all recognise the fact that it is impossible to give the requisite time and attention to the training of medical students in connection with our ordinary hospitals. Such training is a makeshift at best, as the writer well knows from years of personal and rather unsatisfactory experience. If we are to have native medical men trained as thoroughly and carefully as they should be trained, we are bound to have central medical schools with men in them who are set apart to devote their best energies to this work and not expected to do medical teaching merely as a side issue with the remnant of strength left after

attending to their regular practice. Yet how many such schools have we in China? And has the Association, either in general or by its local branches, endorsed a single one? I fear not. The signs of the times, however, are brightening. There seems a good prospect of a union medical school in Peking, another in Chi-nan-fu or Chang-chow-fu, and a third in Hankow, while, as is well known, such a school has been already inaugurated in Cantou, and bids fair to be a great boon to the southern part of the empire. Sooner or later every provincial capital should be supplied with such a centre of medical teaching, and when the time comes let us all put our shoulders to the wheel and help to make such union schools a grand success. Meantime can we not, as an Association, encourage the formation of such union schools wherever it is practicable?

Second.—How far have we enjoyed “mutual assistance from the varied experiences of medical missionaries in this country?”

Personally I feel that I have derived great help and encouragement from the experiences of my medical associates, as published from time to time in the JOURNAL, and to me the JOURNAL has always seemed well worth publishing. But from long observation of its career and from a three years' experience as editor of the JOURNAL, I am forced to concede that we, as a body, fail to do what we could very easily do to mutually assist each other by publishing our “varied experiences.” As Dr. Boone so well says, it has rested with us to show the world that we are doing work which will command respect and support, or by our own supineness lose the opportunity which the publication of this JOURNAL places at our disposal. I fear we shall have to acknowledge that we have not by any means shown the world half of what is being accomplished from year to year in our hospitals and dispensaries, and that we have not added, as we should have done, to our own and the world's stock of knowledge of the conditions of life in China. The very fact that it has been impossible for the editors of the JOURNAL to obtain full returns (or even meagre ones) from more than half the hospitals in China, notwithstanding repeated requests for the same, shows a supineness on the part of some of us which is very disappointing. There has been a dearth too of original investigation on the part of us all, which, while not particularly surprising, considering the fact that each one has his own daily work to look after, is nevertheless to be regretted. Physicians outside of China have a right to expect us, who are on the ground, to enlighten them as to problems which can be solved only by residence and investigation in this country. Aside from purely med-

ical questions I have been disappointed that we have not reported more on the meteorology and the flora of China, as well as other subjects of general interest.

Passing from the question of mutual aid through the pages of the JOURNAL, does it not seem a pity that it should be fifteen years since last we met together as a general Association? I am sure many of us feel it to be so, and heartily wish that we might hereafter have a meeting once in three years, so as to oftener compare notes, look into one another's faces and receive the inspiration of numbers engaged in the same blessed work. Such frequent meetings seem all the more desirable, because in many cases it is impossible for medical men to get away from their posts except at long intervals, and if we had meetings frequently there would be more hope of all the members of the Association being able to be present occasionally.

Third.—So far as the second section of the Constitution, quoted above, is concerned, I think we may say that we have succeeded fairly well in the "cultivation and advancement of mission work", as the general consensus of opinion seems to be that the medical work is a most valuable adjunct to direct missionary effort, and as a means of opening new territory is quite unsurpassed.

None of us can claim that all has been done that might have been done, and in many cases no doubt we feel that not nearly the use has been made of the medical work as an evangelistic agency that might have been made,—either by us medical men ourselves or by our clerical colleagues. As a field for the direct teaching of the Gospel, and for winning one's way to the hearts of people, the wards of our hospitals are certainly a grand place to begin, but to reap the fruits of such efforts they must be followed up after the patients leave the hospital, and I fear that here is where we fail to get out of our medical work the spiritual results which we have a right to expect.

Fourth.—As to "maintaining the union and harmony of the regular profession in this country," the Association has filled a useful place, and it is gratifying to find that those who have come to China during recent years have seemed anxious to join the Association, so that the membership now includes the large majority of those practicing in China. Much, however, still remains to be done in the line of enrolling all who are eligible for membership on the books of the Association, and especially would I suggest the advisability of inviting more of the Customs and other medical men in private practice in China to become members. Such a course will undoubtedly strengthen our influence and

bring us more in touch with a class of men many of whom are doing excellent work. Our Association ought, I should say, to include every respectable man who is practicing medicine in China. Such an increase in membership means increased power, not only through the weight of numbers, but also in the greater variety of contributions to the JOURNAL, and the increased income which will be available for making the JOURNAL better.

Having thus briefly sketched what we have accomplished, and what we have left undone, during the past years, it may be profitable to consider what should be our plans for the future. With all due deference to the opinions of those who may think differently, may I suggest the following as some of the objects we should accomplish during the next few years.

1st.—Enroll all medical missionaries in China, and possibly Korea and Japan, in the Medical Missionary Association, and as many private practitioners as are in sympathy with our aims.

2nd.—Establish our MEDICAL JOURNAL on a more solid basis by making it a bi-monthly and by determining that each one of us will do all in his or her power to make it a success by writing for it at least once in every year or two. The JOURNAL could easily be made a monthly if every one would write only one article a year for it.

3rd.—Establish a medical journal in Chinese for the use of our increasing number of medical graduates.

4th.—Throw all our influence in favor of the establishment of *central union medical schools*, under Christian influences, in the more important cities of the empire.

5th.—Take measures looking to the issue of a *uniform series of text-books* of the medical sciences in good Chinese, in accordance with the new nomenclature to be passed upon by the Association at this Conference.

6th.—Take action favoring the introduction of the *metric system* in our medical teaching and in our medical text-books.



TUBERCULOSIS OF THE JOINTS.

J. H. McCARTNEY, M.D., Chungking.

The American Text-book on surgery says that "the majority of chronic joint diseases are tubercular." Our experience in this part of China verifies that statement. We seldom see Chinese joint disease in this part of China unless it is tubercular, and I think I can safely say that in no part of the world is it more prevalent than here. The surroundings and life of the Chinese, as well as the damp climate in this part, predisposes to tubercular disease in all parts of the body. It is especially marked in the young, from infancy to twenty-five or thirty years of age. The only reason I can give for it being less frequent among those of middle life and older is that it is generally contracted when young, and as the majority die, they never reach middle life.

One author holds that the joint is infected by the opening into the joint of a primary nodule in cancellous end of the bone. Tubercular disease of the bone generally starts in the spongy tissues of the epiphysial ends of the long bones and is readily communicated to the joint. Next to the epiphysial ends of the long bones we find it in the carpus and tarsus, and in the vertebra giving us Pott's disease. Inflammation in any joint may develop tuberculosis there in a patient who is predisposed to that disease. I had a patient lately which illustrated that point beautifully—a man about fifty-five years of age, with an old dislocation of long standing which was impossible to reduce, even under an anesthetic. We decided that the only possible way was to resect the head of the bone in order to relieve the pressure on the axillary vessels and nerves. On sawing through the neck of the humerus we found a well formed tubercular nodule which was about broken down. At the same time we had a grandchild of this patient in the hospital with tubercular necrosis of several bones in different parts of the body. The joints most frequently affected in their order are: elbow, ankle, hip, knee, wrist, and vertebra. The primary cause is generally the same in all cases. A wrench or sprain in a patient predisposed develops into tuberculosis of the joint, principally because of the Chinese ignorance of how to treat an inflamed joint, as all who have had anything to do with trying to keep a Chinaman still, who has an inflamed or broken leg, well know.

Symptoms are common with tuberculosis or inflammations in any other part of the body; we have heat, redness, swelling, and pain in the joints, which rapidly develop in a patient with a tubercular diathesis.

In the treatment of the disease (if we are so fortunate as to have the patient come under our care in the early stages of the disease) is absolute rest in bed or put up in plaster bandages, or both, and if it is the hip that is involved extension is necessary. The Chinese will invariably object to this method of treatment (and if they succeed in deceiving you by saying that their mother or father is very ill and wishes them to return at once, and that they will be back in a few days, which they never do; they will always blame the weight for any symptoms which may follow). After the inflammation and swelling has subsided, I always put them up in a plaster bandage and keep them there for months. If suppuration has taken place and there is necrosis of the bone, the only thing to do is a complete resection of the joint. It is in this class of cases that we can show our conservatism in surgery to the Chinese. As a rule this class of patients do not come to us for treatment early for fear that the "yow yen" which they hear about the foreign doctor (that is, he indiscriminately cuts off arms and legs) will be practiced upon them. When he does come the joint has reached a hopeless condition, and the patient in many instances would be far better off without the arm or leg and would especially make a more rapid recovery if it were amputated. In nine cases out of ten they refuse amputation, giving full permission to do anything else but not cut off the leg. The only thing left is to either refuse treatment or do a resection, which latter often is so extensive that the limb is left flabby and useless. In the majority of cases the patients are very anæmic and constitutionally run down, in which case I always put them on *cod liver oil* and *malt*, or *iron* and *strychnine*. We have very often been agreeably surprised at the results obtained after an extensive resection of the joint. Perhaps all the extensor and flexor tendons have been cut, and the arm is absolutely useless for either flexion or extension, but they have the use of the hand, which is the source of considerable satisfaction to a Chinaman, and he will always praise the results; whereas, if you had followed the dictates of your own conscience and good surgery, he would forever speak evil of you.

My experience has taught me never to wait or delay operation if suppuration is extensive, but to operate at once in order to lessen the drain on the system. The best and safest way is never to be conservative in trying to save bone that has any appearance of being diseased. I have found Dr. Phelps', of N. Y., treatment pure *carbolic*, followed by ninety-five per cent. alcohol, effective, and always freely use *lin. iodine* in doing the dressings. As a rule resected tuberculous joints heal slowly, and if suppuration and necrosis is extensive I very often

treat the joint as an open wound, that is, the wound is not stitched up, but packed with *iodoform* gauze or two per cent. *carbolic solution* and allowed to granulate from the bottom. We use the curette freely when granulating tissue forms, followed each dressing with a free application of *lin. iodine* P. B.

The following notes are taken from cases either now in or who have lately been in the hospital:—

Case I. Woman, married, tubercular inflammation of elbow joint, resulting from a sprain. The entire joint completely disorganized and filled with tubercular nodules. The lower end of the humerus was involved for at least two inches. The ulna was involved for at least two-thirds of its entire length, but happily the radius was but little infected. The ordinary incision for resection of the elbow was made. The lower two inches of the humerus and two-thirds of the ulna was resected with a chain saw, the tubercular joint curetted out and the wound stitched up with rubber drainage inserted. She was able to leave the hospital in about six weeks, but with very little voluntary motion in the joint. At the end of three months she could use a comb, and at the present writing has absolute perfect motion and use of the arm, with over two inches of shortening.

Case II. Resection of the lower half of the radius. A child about ten years of age with a very tubercular history. He had tubercular disease of the scapula as well as the pelvic bones and the lower two-thirds of the radius. We removed the diseased portion of the radius, and sewed up the wound, with drainage. The wound healed slowly, but he made a good recovery after nearly four months and repeated curetings, with the exception that the hand is pulled to the side where the bone was removed.

Case III. The patient, a lad about twelve years of age, with enlarged ankle joint and several discharging sinuses. The joint was opened up and the os calcis and astragalus removed, gauze drainage was brought out through the sinus and the incision sutured up. After wound healed his foot was put into plaster of paris. It healed slowly, and it was necessary for us to curette out the sinuses several times. Eventually a good result was obtained, and he now has perfect use of his foot.

Case IV. A young man about twenty-two years of age, very anemic, discharging sinuses in both the plantar and dorsal surfaces of one foot. We removed all the metatarsal bones and all the tarsus, with the exception of the os calcis and astragalus. He is now in the

hospital, but markedly improved in health, and the sinuses are rapidly improving under swabbing of *lin. iodine*.

Case V. Hip joint disease. The patient a young man about twenty-five years of age. He has had the present trouble for over one year. He had two discharging sinuses, one from the hip and the other in the groin, evidently communicating with a psoas abscess. We removed the head of the bone and applied extension. At the present writing, after three weeks' treatment, the wound has healed and he has no discharge from the hip, but the inguinal sinus still discharges large quantities of pus. His case is hopeful.

Case VI. A boy fifteen years old with hip joint disease. The trouble began over a year ago, at which time he had a fall on his hip. It became very painful, and almost from that time until he came to the city he was unable to walk. When he presented himself at our clinic we found him greatly emaciated and run down in health. The pain on slightest motion was unbearable; the only position in which he could obtain any relief was to lay with his diseased leg crossed over his good one. The head of the femur completely luxated (in fact it might be taken for a dislocation) which materially aided us in the resection of the joint. On opening into the joint we found the pelvic bone all honey-combed and the brim of the acetabulum almost obliterated. The bone was sawn through below the great trochanter and the wound packed with *iodoform gauze*. Since the operation he has greatly improved in health, but I consider his chances for recovery very poor.

THE CHEERFULNESS OF DEATH.

Most people, even most Christian people, shrink from death. In sermons and hymns, and in literature, it is generally represented as repulsive. It is spoken of as "Death's Cold Stream," "The Last Enemy," the "Dark Valley of the Shadow of Death," and the "terrors of death" are pictured in vivid terms. For the Christian at least, this is all wrong. Death should be in reality his best friend; welcomed rather than feared.

So far as the physical aspect of death is concerned, the universal teaching of physicians is that the process of dying is rarely painful or even unwelcome to the patient, though full of sorrow to his family. A happy unconsciousness in nearly all cases shields the dying man from pain. The weakness, the fever, the parched lips, the labored breathing, are all unfelt. Most people die quietly and often almost imperceptibly.

"We thought her dying when she slept,
And sleeping when she died,"

is often true. Even when convulsive movements occur, they are entirely independent of consciousness; merely physical in origin and character, and absolutely unattended by any suffering.

If, then, death is not an unpleasant process physically, why should it be feared from the spiritual side? See what it does for the Christian.

It frees him from accident, sickness, and suffering, to which his body has been liable all his life, and from which he has often suffered, sometimes intensely and for long periods of time.

It frees him from all sorrow. No one who has reached even adolescence escapes sorrow. To many, sorrows are multiplied manifold and bear down even the stoutest heart. The "weary" and the "heavy laden" make up the mass of mankind.

It opens the gates of heaven to him. While we know nothing accurately of the details of the heavenly life, we do know that there we shall live in eternal bliss; there we shall be in the presence of God himself; there we shall see and know intimately our Lord Jesus Christ; there we shall feel the influence of the Holy Spirit; there we shall meet the saints of all ages; there we shall be reunited to the dear ones who have happily preceded us; there shall come, in due time, the dear ones we have left on earth; there our minds will expand beyond our present comprehension; there all the unsolved problems of earth will be clear as day; there we shall learn why perplexity, disappointment, and trouble were our lot on earth and were needful for the orderly and sufficient development of our own character, and of God's large plans not only for us, but for the race; there, in a word, all that is evil shall vanish away and all that is good shall be ours forever.

If death, then, is not a painful, unpleasant process, and if it does for us so much, it should be, not the last *enemy*, but our best *friend*; not dreaded as the messenger of evil, but welcomed as a companion who will lead us into paths of pleasantness and reveal to us the joys for which we have been longing all our lives. We should not speak of the terrors of death, but should feel in our very hearts the cheerfulness of death.

—W. W. Keen, M.D., in *The Outlook*, October 24th, 1903.

The China Medical Missionary Journal.

VOL. XIX.

MARCH, 1905.

No. 2.

Editorial.

The recent meeting of the China Medical Missionary Association marks, we trust, a new beginning for the organic life of the Association as well as new impetus for the work we are trying to do. In spite of the inconvenience of the time there were some forty delegates present, and those who came felt well repaid for coming and, not to be too unkind, we trust that those who stayed at home for lack of interest or energy will live to regret it and be here in 1907. The arrangements were well made and were entirely due to the efficient management of Dr. Boone, and the business meetings were held in the new sun parlor of St. Luke's. The sun did not keep his part of the contract, but that was not the fault of the management.

The chief note of the conference, which was struck at the first meeting and dominated all the meetings, was the education and training of the Chinese, and here the most important work was done.

The work of the Nomenclature Committee is too well known to need any special meed of praise from the columns of the JOURNAL, and the two reports already issued make us proud of our colleagues who can accomplish such good things. The conference in recognition of the necessity for uniformity in the excellence of its medical literature and text-books, appointed a Publication Committee to have special oversight of the work, and also decided that it was best that the Association should own its own text-books. It therefore voted to this committee four-fifths of its surplus funds, which amounted to \$400, and the members and friends present subscribed \$400 more.

It is believed that with the constantly increasing demand for this class of books the work will soon become self-supporting and

enable the Association to increase its usefulness by buying new books as they are prepared and accepted by the committee. It is also planned to later start a medical journal in Chinese for the benefit of our students and assistants.

Let every member of the Association aid this work financially, both by donation from hospital funds and personal subscription and by his influence among native and foreign friends. In another part of the JOURNAL will be found the list of paid up subscriptions, and this will be added to from month to month, so that the members may know how the subscription stands. It is estimated that five thousand Mexican would be sufficient to give this work an adequate financial start.

There was no special legislation on the subject of central medical schools, though strong resolutions were passed favoring them and commending those already in operation.

The medical and surgical papers read were interesting, and the chief regret was that, in the press of other business, there was so little time for discussion.

The Constitution and By-laws were revised, and will be sent to each member of the Association with this issue of the JOURNAL.

There was much regret expressed by some of the members present that no discussion on hospital construction was held. But everything that ought to be discussed in a work so extensive as ours cannot be crowded into three days, and we hope that some good ideas may be brought out at the next general meeting.

The two general meetings on Monday and Tuesday evenings, addressed by Rev. Mr. Hoste and Bishop F. R. Graves, were very helpful.

The reception held ou Wednesday evening by Dr. and Mrs. Boone for the delegates and their wives was a delightful ending to an enjoyable occasion.

We wish with all our hearts that the far-away members of the Association might feel the inspiration of the meetings and the unity of our purpose. The thoughts of many of us in those days were with you in your isolation and loneliness, and as our thoughts turn to you with appreciation and blessing so may this Association be to you both a help and encouragement.

The Association picture was taken by Satow, Nanking Road, and copies may be had from him at the price of \$1 for the ordinary and \$1.75 for bromide prints. A smaller sized picture, taken by Dr. Guinness, who has kindly left his plate with Satow, can be obtained there at 20 cents a copy or 30 cents bromide prints.

As will be seen by this number, the Association has proved its bravery by voting to make the JOURNAL a bi-monthly, which means that you will hear from us six times a year instead of four. We sincerely hope that these heart to heart talks will not be in the nature of monologues by the editor.

Do not forget that after the stock of good things from the Conference larder is exhausted we shall need more food; so keep yourselves in active training for 1906 and make the JOURNAL the vital force in the life of its readers that it should be. Do not forget to send us those statistical blanks, for we want to publish the statistics in the July number and not wait until they are too cold. Also hospital reports. So far we have received four.

Owing to the necessity of getting a certain proportion of the Conference matter into the March issue of the JOURNAL, Medical and Surgical Progress, Hospital Reports, and Correspondence have been omitted, but will be inserted in the May issue. Editors of departments are kindly requested to send in their matter by the 10th of April at the latest.

The JOURNAL wishes to call the attention of its readers to the fact that at the Fifth Triennial Meeting of the Educational Association of China there will be a sectional meeting on Medical Instruction, led by Dr. H. W. Boone, on Friday, May 19th. It is earnestly hoped that some or many of the members of the Medical Association, who were unable to be present at the Conference in February, may be present at this time.

PUBLICATION COMMITTEE.

Subscriptions Paid.

The Association	...	...	...	\$400	Dr. Wittenberg	...	...	...	\$ 10
Dr. Cousland	...	...	...	30	„ Maxwell	...	...	...	10
„ Worth	...	...	...	30	„ Broomhall	...	...	...	5
„ Butchart	...	...	...	20	„ Evans	...	...	...	5
„ Woodhull	...	...	...	20	„ Palmberg	...	...	...	5
„ Lincoln	...	...	...	20	„ Ellerbek	...	...	...	5
„ Boone (St. Luke's)	...	...	...	10	„ Jones	...	...	...	5
„ Cox	...	...	...	10	„ Shields	...	...	...	5
„ Garner	...	...	...	10	„ Worley	...	...	...	4
„ Kember	...	...	...	10	„ Siau	...	...	...	3
„ Taft	...	...	...	10	„ Kyong	...	...	...	3
„ Wilkinson	...	...	...	10					
									\$640

 Personal Record.

 BIRTHS.

- AT Ichang, February 3rd, the wife of Dr. GEORGE F. STOOKE, C. S. M., of a son (John Graham).
- AT Ashi-ho, Manchuria, December 30th, the wife of E. McKILLIP YOUNG, M.B., Ch.B., of a daughter (Marion).

 MARRIAGES.

- BROOMHALL—ALDWINCKLE.—On the 28th of February, 1905, at the Cathedral, Shanghai, BENJAMIN CHAS. BROOMHALL, F.R.C.S. (Eng.), of Tai-yüan-fu, Shansi, youngest son of Benjamin Broomhall, Esq., London, to MARION, third daughter of Alfred Othniel Aldwinckle, of Highbury Park, London.
- AT Pao-ning, December 15th, WILLIAM SHACKSTON, B.A., M.D., and ALICE SARAH KNIGHTS, both of the C. I. M.

 DEATHS.

- AT Lien-chow, N. W. part of Kwongtung Province, November 3rd, 1904, HOWARD WOOD, son of Dr. and Mrs. Edward C. Machle, aged 8 years, 11 months and 1 day. (Diphtheria.)
- AT Ngankin, February 4th, Dr. A. L. SHAPLEIGH, C. I. M., from small-pox.

ARRIVALS.

December 9th, Miss E. L. MASTERS, M.D., M. E. M., Foochow (returning).

December 15th, Dr. and Mrs. LORENZO MORGAN, S. P. M.; Dr. W. E. SMITH and family, C. M. M., Kia-ting (returning).

December 21st, Dr. G. WHITFIELD GUINNESS, C. I. M., Kai-feng-fu (returning).

December 31st, Dr. and Mrs. SHAPLEIGH and two children, C. I. M.

At Hongkong, Dr. R. H. GRAVES and wife (returning), Dr. J. G. MEADOWS and wife, S. B. M.

January 23rd, Dr. C. F. MILLS and wife.

January 28th, Dr. and Mrs. R. T. SHIELDS, S. P. M., Dong-sung.

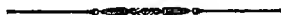
February 6th, Dr. C. F. COLE, C. M. S., Ningpo.

February 19th, Dr. G. A. HUNTLEY and family, A. B. M. U., Han-yang (returning); Dr. A. P. LAYCOCK, C. I. M.

DEPARTURES.

January 9th, Dr. E. H. HART and family, M. E. M., for U. S. A.

February 21st, Dr. GEORGE T. LEEDS and family, A. B. M. U., of Burmah, for U. S. A.



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NOW READY

HANDBOOK OF PHYSIOLOGY, INCLUDING HISTOLOGY.

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The latest English edition of Kirke's, now called HALLIBURTON'S Physiology, from which this translation was made, may also be ordered through the Presbyterian Mission Press, Shanghai.

The China Medical Missionary Journal.

VOL. XIX.

MAY, 1905.

No. 3.

Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

OPIUM SMOKING IN CHINA.

By W. H. PARK, M.D., Soochow.

My Chinese friends tell me that when opium was first introduced into this part of the country it was used principally by the upper classes, and no one thought there was any harm in it at all. The idea was thus formed that opium smoking was a gentleman's pastime, and even now, when its ravages are apparent to all, this idea seems to still cling to it, and the Chinese who speak against the habit seem to have in mind not the rich gentry, not the well-to-do merchants and not the powerful officials, but the unfortunate wretches who are too poor to buy the drug. The highest in the land smoke without any apparent loss of name, prestige, or official position; pipes and smoking paraphernalia are found in nearly every well-appointed home, and nearly all important business transactions are carried on over the opium pipe. The majority of those who can afford it seem to smoke; millions smoke whether they can afford it or not, and those who are really too abjectly poor to begin talk as though they would smoke if they could. Ask any poor countryman if he smokes and, in nine cases out of ten, the reply will be, "Haven't the money;" the inference being that lack of money is the only thing between him and the habit.

There are some, however, who are beginning to look down on the habit, even among the well-to-do. I am reliably informed that many Chinese are not as ready to lend money to an opium smoker, even though rich, as to one in equal circumstances not a smoker, and we often hear it said that so and so, among important families and officials, smokes opium, and therefore does not attend to business and is of no use

whatever. No Chinese wants an opium-smoking wife, and some of the rich men in Soochow will not knowingly betroth their daughters to opium-smoking men. Viceroy Hsi Liang says: "Of all things which injure the body and impair the mental energy none are equal to opium smoking and binding the feet."

But when they come to speak of the men who have to sell lands and houses, wife and children, do without food, pawn their clothes, lie, cheat, beg, steal, borrow and rob in order to get opium, then the qualities of the Chinese language for picturesque description shine forth in all their glory. The common name for such men is "Opium Devil," and the tone of contempt with which the name is pronounced leaves nothing to be desired. A beggar in Soochow, when asked where he lived, replied, "Next door to hell," and investigation showed he lived next door to a beggar opium den.

So far as my own observations go, opium smoking is one of the worst vices ever invented by human beings. I would not, under any circumstances that could be mentioned, receive an opium-smoking medical student, and I would as soon think of employing a leper in the hospital as an opium-smoking coolie, cook or orderly. Among people of ordinary means—small shopkeepers, clerks, yamên-runners, working men, coolies, and farmers it is ruinous. Formerly our observation as missionary physicians was mostly limited to these classes, but of late years I have come in large contact with the upper classes and have had the opportunity of observing the effects of opium among them as well. Some of my best friends amongst the Chinese are opium smokers, and while I can observe no moral deterioration, yet no one can claim that they are not being injured physically by the habit. I am almost shocked sometimes when, as often happens, a year or more elapses without seeing one of them. Where they limit themselves to two or three mace the physical injury may not come so soon as in the poor who have to skimp in clothes and food in order to get this amount of opium, but come sooner or later it surely does, and the exception only proves the rule. But unfortunately all do not limit the amount to two or three mace per day. Having the two requisites—money and leisure—many of them give themselves over to the drug and use incredible amounts. The most I ever heard of was six Chinese ounces (3,500 grains) per day, enough, if taken as a poison, to kill thirty or forty men a day. But in order to make away with this amount he had to swallow about half of it raw. He employed two servants to help fill his pipes, but occasionally during the night, when he did not feel he was getting it fast enough, he would seize a cup of opium, gulp down enough to kill four or five men,

more or less, and then go on with his smoking. Of course you will not be surprised to hear that I found him dying when I was called to see him. He died at the age of 24 from general dropsy due to impoverished blood, due to lack of appetite, due to auto-intoxication, due to constipation, due to opium inhalation. So far as I know this is an exceptional amount, but one ounce or more (five or six hundred grains per day) is not exceptional. I often meet men who smoke about one ounce, and when I am to go to see them, they send special word for me not to come before 4.00 p.m., as they do not get up before that time. Many of them live in constant dread of the next defecation, often fifteen days off, which they liken to the pain of child-birth, or of opium diarrhoea, which they dread more than the constipation, and it is understood that no doctor who knows his business will ever give one of them a cathartic. Mr. C—— told me the other day of his brother who went 23 days without a motion, then defecated exactly 23 days and died. I know of another man, aged 26, whose bowels, so one of his relatives told me, move once only in 40 days, nine or ten motions a year! At the end of thirty days he begins to take "Looking Down" medicine, and when the time finally arrives his servants have to help him with hooks. For obvious reasons I refrain from giving name and address, but both are well known. I never feel much more helpless than when called upon to treat such cases. They have their own ideas as to diet, and to give them drugs is worse than "carrying coals to Newcastle." If their disease is a painful one (and they are just as liable to pain as other men are) our sheet anchor for pain will not hold; if constipation, they are afraid of diarrhoea, and if it is diarrhoea, scarcely anything will stop it and so on, and yet many of them get well and exist to a good old age.

In addition to the millions who take to opium as a pastime, or form the habit in the course of business, other millions smoke on account of disease. All painful diseases tempt to the use of the pipe, but the principal diseases for which the Chinese smoke are spitting of blood, indigestion and flatulence, diarrhoea and dysentery, spermatorrhoea and bleeding piles. Socially I constantly meet smokers who claim to have been cured by opium of some one of these diseases, but in a medical way I meet many more who deny any benefit whatever except in the beginning. They all use the same words, "Efficacious in the beginning, but after the yin is formed no use at all." The Chinese in this part of the country never take opium as a prophylactic, and I never hear them claim that it will ward off rheumatism or malaria.

IS OPIUM SMOKING PROPHYLACTIC AGAINST MALARIA ?

If it is, the opium smokers in and around Soochow, where malaria abounds, have not discovered the fact, and they are not likely to either, for they find themselves afflicted with it just as often as their non-smoking neighbours. Just as many opium smokers in proportion come to the hospital for *quinine* as non-smokers, and I have met dozens of cases of malaria among smokers in prominent families since beginning this paper. Two of them were prominent doctors. One of them was one of those constipated cases, a young man who goes to stool once or twice a month, and is so weak and emaciated he faints dead away during the operation. Surely it was a brave mosquito that put his bill into him. The only way I can conceive of any prophylaxis is that the fumes of the opium might drive the anapholes away ; or can it be that the blood of the smoker is so poisonous the mosquito is afraid to bite? Or if it does bite, falls down dead in its tracks? Anyway, even if I had never seen a case of malaria in an opium smoker, I would consider the remedy worse than the disease. Would rather my father should hear I had double compound comminuted quotidian tertian and quartan ague combined than that he should be told that I had become an opium sot in order to ward off malaria.

The more I see of opium smoking the less I believe in it. There is not one word I can say in its favor. The pleasure it gives lasts for only a few months, or at most a year or two, in a life time, for its votaries tell me that after the yin is well established they smoke not for pleasure but to keep themselves from suffering, and, said a prominent smoker to me the other day, there is not a man among them but repents him of the habit after it is formed. And in disease it is worse than a failure. In chronic cases, after the first few weeks of improvement, ninety-nine cases out of a hundred are all the worse for the habit, and as for acute diseases there is not one in the whole catalogue that justifies making a man into an opium devil. Thousands of people, women as well as men, go through life weak, emaciated, constipated and useless, imagining that the disease for which they formed the habit is still on them, or is ready to break out at any moment if they stop smoking, when all that is the matter with them is opium, and they would be a thousand times better off if they had never heard of the miserable drug. When I was a student in New York in 1881 our professor of materia medica named opium as the first and most valuable of all drugs, but when I was there in 1903 no teacher ever mentioned opium for any disease, save inoperable cancer, except to condemn it.

HOW LONG DOES A PERSON SMOKE BEFORE THE YIN IS ESTABLISHED?

It depends on whether he smokes daily or only occasionally. If daily, one or two months will not go by before the chains are forged and his liberty is gone forever. If only occasionally, he may be one or two years in forming the habit.

ARE OPIUM SMOKERS ABLE TO PERFORM MORE ARDUOUS TASKS THAN NON-SMOKERS?

I have seen this claim in print, but it should be put on a par with the claim of machines for perpetual motion. One is just as reasonable and scientific as the other. The most arduous work around Soochow is carrying sedau chairs, and I, in common with the native doctors of the city, have long ago given up using opium smoking coolies for this purpose. Many of them are all the time running into people on the street, for they are too weak to yell and carry the chair at the same time. Like the famous locomotive that stopped whenever it blew its whistle, they haven't enough breath to go on with the chair if they have to spend much of it in calling to people to get out of the way. No, opium does not in the long run enable its slaves to do harder manual labor or any other labor than other people, but the contrary, nor is there any useful calling on earth that is improved by it. Does any one imagine for a moment that the Japanese would be able to perform the arduous tasks they are performing in this war if the nation had taken to opium when the Chinese did and had used it as universally as the Chinese have done? All honour to the brave Japanese! But the victory won in keeping opium smoking out of their fair land is worth more to them than any other victory ever won on land or sea.

Discussion.

During the discussion that followed, Dr. Wittenberg spoke of a Chinese anti-opium society which had been started with a membership of 100 and now numbers 300. The members pledge themselves not only not to smoke themselves, but to refrain from giving the opium pipe to visitors. They meet once a month in a room in a Confucian temple, when lectures are given by missionaries or others. Such societies are of great value and influence and are worthy of extension.

Dr. Butchart then moved that the paper by Dr. Park be put in form for publication and general use, both in foreign lands, England, America, and Manila, and also in China; that as an Association we endorse this paper and encourage the formation of anti-opium societies in every way we can, as suggested by Dr. Wittenberg.

Dr. Lincoln asked for a discussion on treatment.

Dr. Kember asked whence had come the idea that opium was a prophylactic against malaria.

Dr. Park said his practice was to give a strong purgative (*calomel* and *Epsom salts*) at the beginning of treatment.

Dr. Venable also adopted this method.

Dr. Wilkinson had found a cathartic unfavourable in weak patients. He believed rather in seeking to build up the patient's strength, reducing the quantity of opium gradually. *Chloride of gold*, $\frac{1}{12}$ grain, three times daily in conjunction with *strychnine* (up to $\frac{1}{30}$) he had found of value. His practice is to keep the patients under treatment until they can do a full day's work without taking any opium.

Dr. Cousland said he had tried Dr. Whitla's suggestion of giving alcohol in large doses so as to produce a slight condition of inebriety; he had also tried *sodium bromide* in large doses, but could not report very favourably of either method. He had, however, known Chinese who had quite broken off the habit by keeping themselves under the influence of alcohol. At present he was using, with good results, *belladonna* in large doses. It should be pushed until physiological effects be manifested, such as dilated pupil and dry throat.

Dr. Osgood spoke of the use of the passion flower in doses of two teaspoonfuls of the tincture given at night. Good sleep resulted without any subsequent ill effect. He had also found *morphine* and *atropine* in small doses useful to patients breaking off opium, a pill containing *morphine*, gr. $\frac{1}{4}$ and *atropine*, gr. $\frac{1}{100}$.

Sparteins, gr. $\frac{1}{4}$, and *nitro glycerine*, gr. $\frac{1}{100}$, had been found useful by some. The question as to why so many feared to give a general anæsthetic to opium patients was discussed. Dr. Maxwell had found that diarrhœa was set up, but could not affirm that this was due to the anæsthetic. Dr. Boone believed that no ill effect would follow the administration of an anæsthetic to an opium patient, provided the opium was not broken off suddenly.

Dr. Charles F. Mills remarked that some of the methods found of value during a special practice among *morphine* habitues in America (U. S.) may be of interest. Observations made during a space of over two years of dealing with a class of patients who had time and money at their disposal have led to a discontinuance of the sudden withdrawal method, especially in the cases of medical men who made a considerable proportion of the cases treated. The first thing is to secure the confidence of the patient, and compel him or her to believe that they shall not be permitted to suffer unduly, and that they shall be kept comfortable at

all times and not allowed to collapse on the withdrawal of the *morphine*. For the first day of admission the syringe is left in possession of the patient, although the usual dose is taken in the presence of the physician, who thus becomes familiar with the peculiarities of the patient in regard to the administration of his dose. During the second day inquiry is made into the general condition and an opinion formed in regard to the quantity of *morphine* needed to secure comfort. The second night the amount is diminished at least one-half, and the next day the syringe and supplies pass into the hands of the physician. The third night the dose is still further cut down to one-third or one-quarter, and a supply of pills, containing opium or some of its derivatives in small amount, is left in charge of the attendant, who does not leave the patient, and these are given freely as indicated. On the fourth night it is usually possible to stop the *morphine* and employ *codcin phosphate* still by the syringe and the night supplies of pills include pills of *cannabis indica* to be alternated with the opium pills. The endeavor is to secure discontinuance of the syringe to which the patient is strongly attached and to give all medicines by the mouth. For the insomnia and restlessness there has not been found anything to equal a full bath of water at or above the body temperature and continued long enough to produce a sensation of freedom from anxiety. This can be repeated frequently as wished by the patient. No treatment is given for diarrhoea, as it does not last long unless the withdrawal has been too rapid. Food is given at frequent intervals during the day and night, for the hunger is usually ravenous. An electric light cabinet is very useful to alleviate the restlessness. An ordinary small room or closet, fitted with say 100 electric lights of 18 c. p., in which the patient remains until free perspiration ensues, answers the need. Massage is then given and the patient becomes sleepy for some hours. Before the syringe is altogether given up it is sometimes helpful to give a dose of *apomorphin hydrochlorate* in amount not quite sufficient to produce emesis. This acts well as a hypnotic. For the best results the patient is advised to remain under treatment for three months; the first part of the time being always with the companionship of an attendant and under close confinement under lock and key. In all the records which I have been able to consult there has not been a single case of death resulting from sudden and complete withdrawal of the drug, although this is greatly feared by the patients who have had an extended experience of various sorts of treatments. The employment of heroic doses of *bromide of potassium* has been tried in one case, but the results did not encourage further experiment. The use of *hydrastin*, as is the chief practice of a large private hospital in the middle west, is

spoken well of by the physicians who have taken this form of "cure," but who, at the time of giving their recommendation, had relapsed to their old habits with the syringe. The temperature of the room should be kept sufficiently high to insure the warmth of the patient, who always feels chilly, unless it is 80 or 85 Fahr.

Dr. Maxwell mentioned that in Formosa opium is being pushed among the Chinese by the Japanese.

ABSCESSSES AND ULCERS.

By E. I. OSGOOD, M.D., Chu-cheo.

It is an old subject and an old sore—in more ways than one. It comes up so often that we delegate it to routine treatment. It is chronic, and the treatment becomes chronic, and with the hurry of large clinics our knowledge of the subject may become slightly chronic. In the chronic form, ulcers and abscesses become the "bêtes noires" of the physician. The personal hygiene of these people is vicious, their habits are intemperate, and their systems have been vitiated by unwholesome and irregularly taken food, by insanitary modes of life and neglect of every known law of health. Farthermore, to bring them into better conditions, is well-nigh impossible. Even the poorest beggar among the Chinese may ask, "What must I avoid in eating," but regularity in meals, cleanliness of person and habits, different sleeping places, and rest to the diseased member is beyond their comprehension.

What shall we do then? Shall we continue telling them the things they ought to do? Or shall we in routine manner deal out the ointments with instructions as to applying cleanly and washing regularly? Shall we continue taking into hospital all who can pay their way or all for whom we can find a way? Shall we establish free wards for those who have no money and no desire to find any? The giving out of ointments and salves are too often but a salve both to the sore and to our consciences. That kind of a salve is not healthy even for us.

The amount of space given to this subject by medical authors is not encouraging. Yet one point, of which we too often lose sight, runs through them all. Back of the ulcer is a vitiated system which should attract more attention than the effect on the skin surface. The trouble must be stopped at its source. The giving out of salves and ointments and washing of the diseased portion has a certain use, but alone is not much better than the black salve of the Chinese physician. It is working at only one end, and that the wrong end.

So in naming ulcers the text-books have used the pathological nature in preparing a nomenclature. It is syphilitic, carcinomatous, tubercular and so on. Here is the key to successful treatment. The clear understanding of the source from which the disease has sprung, will be fruitful of better results than some of us have had in the past. The general condition of the patient must be carefully studied. Better do a better quality of treating rather than have the great quantity of treatments to show up at the end of the year.

Looking over our lists of patients who have applied for treatment we find that those who have been afflicted with ulcers and abscesses form the largest per cent. of the total. It is a common boil, or a carbuncle, or a cold abscess. It is a lupus, a cancer, a varicose ulcer, syphilitic, tubercular, gangrenous, diabetic; one caused by dirt and grown large by reason of neglect and Chinese plasters. It itches until the patient in agony scratches away the surrounding tissues. It burns, or pains, or may be is just a sore that causes little trouble but saps away the strength and vitality by constant discharge.

So a large proportion we delegate to an assistant who washes and applies the dressing, day after day, and no account is paid to the source farther than giving some tonic, also routine; nor to possible changes the patient may pass through.

With few exceptions, abscesses and ulcers appear on persons debilitated, persons whose systems have been deranged by abuses arising from evil living and ignorance. They are not a hopeful class upon which to operate. They are in poor condition for the anæsthetic or the knife. They have no time or money to put in idle days getting well. If in the hospital they soon want to go home and come again. If in the out-patient department they will not come regularly for sufficient length of time. Yet for our own good each case should be differentiated and personally and intelligently treated. The fault of not reaching the stage of complete healing will not then lay at our door and the added knowledge and clear conscience will pay for the extra trouble.

Modern nomenclature classes under the term of ulcer, any sore left by the destruction of the skin and adjoining tissues. Since abscesses often lie back of this destructive process and external sore is not greatly removed from an internal one, indeed has close relationships, we are discussing the two together. Both have been divided into as many divisions as there are authors who have written about them. We shall not try to cover the complete ground, but will speak of typical and leading forms, the treatment of which will cover nearly all varieties.

Abscesses may be either acute or chronic. Some forms of the former are felon, furuncle, carbuncle, and varieties arising from glandular disturbances. The latter deals with those termed as cold, scrofulous, tuberculous, syphilitic, etc.

A *felon* or whitlow is a suppurative inflammation involving the fingers. The pain is out of all proportion to the apparent extent of the disease. It may be only an inflammation of the tendon sheath or may be a circumscribed osteo-periostitis. It is usually the result of some prick from a sharp instrument or a simple inflammation arising from a bruise, arresting any microbes circulating in the locality.

Furuncles or boils are circumscribed inflammatory abscesses that are caused by invasion of bacteria into the deeper portions of the skin. It was long supposed that they were due to impurities of the blood which nature thus undertakes to throw off through the skin. Hence many persons have been comforted with the thought that every boil is worth money and time to him, as otherwise his body might be attacked with a worse trouble. He has been living in the "bliss of ignorance." The route of infection may follow in the track of a hair to its follicle or may come through defective glandular action. They are as likely to follow a disease as to come by themselves. Following ivy and Ningpo poisoning, erysipelas, or severe diseases like typhoid fever, they make convalescence a burden instead of a luxury. Especially is this true when they come in "crops."

A *carbuncle* is an aggressive boil: the latter having one head, the former many heads. It is a specific spreading inflammation of subcutaneous structures, but also involving the skin and terminating in gangrene of the affected parts, discharging the destroyed tissue in form of sloughs. It is much more profound than a boil, even being dangerous to life. It almost universally occurs after middle life. We have seen them on the back of the neck, over the spinal column, and back of the shoulder joint. They are easily differentiated from a boil by the extensive hardened infiltration surrounding the central point. If left to take its course, the entire affected area breaks down with a resulting large slow-healing ulcer. The pain at first severe and agonizing, later may disappear and anæsthesia of the involved tissue ensue.

Glandular abscesses are in many ways harder to treat than other forms. They are long-lasting, multiple, and will spread to other glands and then defy healing measures. They are roughly divided into four classes according to location, viz., cervical, axillary, mammary, and inguinal. Any diseased condition of the body is liable to be communicated to them through the lymphatics, and they, in a measure vicariously

for, and in union with, some internal organ suffer the results of unsanitary and careless living.

Chronic abscesses are variously called cold, chessy, tubercular, syphilitic, etc. They are most frequently tubercular, and arise from tubercular infection of the bones or glands. The glands of the neck, axilla and groin slowly swell and as slowly but continuously discharge. They creep through all the tissues surrounding the hip joint in neglected cases where that part is the seat. From the axilla they extend down the interior aspect of the arm and from the groin they enlarge the inner aspect of the leg. As chronic they may cause little pain, but a pre- or post- acute attack supplies the deficiency. When these cold abscesses arise from other causes like syphilis they may choose such sites as the forehead, nose, and shoulders.

Ulcers are no great distance removed from abscesses. Their origin, affect upon the system, and treatment are much alike. Too often they are associated together. An ulcer is a surface abscess or one in which the fistulous opening has become as large or larger than the base of the abscess cavity. In general they are divided into simple and septic. Septic ulcers are either acute or chronic inflammatory. The chronic may be the so-called varicose, syphilitic, or tubercular. Some of these classes may become gangrenous.

Simple ulcers are usually caused by a wound in which the parts concerned are either torn away or are so injured that they die. There is no infection, and hence if in a healthy subject, they heal readily under antiseptic treatment.

The *Acute inflammatory ulcer* starts very much like a boil. The infection is introduced through the hair follicle or by the gland. Instead of throwing off the "core" and healing the inflammation spreads until the adjoining surface is destroyed and an ulcer, varying in size from a pea to a silver dollar, is the result.

The *varicose (?) ulcer* of the chronic form is the most troublesome. The term is a misnomer. Because of enfeebled circulation and inflammation extending from a chronic irritable sore, the veins and capillaries are both enlarged and the surface assumes the well known bluish hue. An abrasion of the skin, whether from itching and scratching, or from a pin prick, becomes verdant soil for microbes, who take good care that the sore shall remain and perhaps enlarge as long as circulation in the part is retarded. Most likely the patient is one who has to be constantly on his feet, hence the lower leg is the most frequent site. It is a "leg case." By reason of an intolerable itching eczema or an excoriating discharge or uncleanness, the wound slowly

enlarges. When like the syphilitic sore the discharge softens and destroys the tissue below and heals above, it becomes a serpigenous ulcer.

Syphilitic ulcers do not connect themselves with localities, the poison being circulated through the entire system. A syphilitic gumma breaks down and there is an ulcer. They may be an aggravated eczema and spread over large surfaces, the rubbing of the clothing assisting in the spread of the poison. Their unclean habits, together with their dread of hot water (for heat aggravates syphilitic conditions), causes the skin to become encrusted with dirty scabs. The sore usually has sharp, steep edges, giving a punched-out appearance. The base is devoid of granulations and covered with a greyish-yellow slough. Ordinarily the surrounding tissues are healthy, except where poisoned by the discharge. The odor may be sufficient for diagnosis.

Tubercular ulcers in the cutaneous form appear after the rupture of a tubercular gland or as a lupus. The latter is beyond the scope of this paper. The former can be diagnosed by the history of the patient, both as to local sore and general debility. The flaky oily discharge, the flabby granulations, the purplish margins and undermined edges are all diagnostic and characteristic.

Gangrene is of two varieties—dry and moist. The former occurs in aged people of thin or emaciated habit. Occurring in those parts of least flesh, the part dries or mummifies. There being no moisture, there is no putrefaction. It results from arterial disease, whereby the blood supply is cut off and no fluid is brought to the part. The veins and lymphatics being unobstructed, all venous blood is drained off and the remaining moisture is evaporated. A pure case of dry gangrene is not often seen. Some of the affected part will be more fleshy and putrefaction of this tissue will introduce moist gangrene. This latter variety may be caused either by a sudden arrest of the arterial supply or obstruction of the venous. The part is engorged with blood, the hemoglobin perculating through, giving the characteristic dark almost livid color of moist gangrene.

Treatment.—While we have not covered the entire ground which abscesses and ulcers occupy in the pathological field, we have said enough to show the general characteristics and to prove that treatment must go farther than merely the external sore. While nature will do her best to recover her equilibrium, and while cleanness with dry or moist dressings will in no small measure aid in the process, yet considering the class of diseases and deranged systems from which abscesses and ulcers spring, systematic internal treatment is essential to complete and speedy healing.

Back of the external manifestation stands a debilitated system, unsanitary surroundings, and bad habits. With felons, boils, and carbuncles are frequently associated hepatic and renal troubles. Syphilis and tuberculosis are clearly associated with other varieties. A disordered digestive system, enlarged spleen, weak heart, and contracted chest may be the rock in the way of healing. Hence the necessity of studying *arsenic*, *mercury*, *phosphates*, *cod liver oil*, etc. The dietary must be studied, the bowels regulated, the urine examined, the stomach toned up. It may be that rest and wholesome food will do the work. There may be a chronic malarial condition to be overcome. Anemia is often present. Dropsical conditions abound. Irritation from clothes, cloth dyes, mud of the rice fields, may be the cause.

When the trouble is presented to our clinics in the acute inflammatory form, every effort should be made to stay the process. A suppurative process, be it a boil or cold abscess, does not benefit the sufferer. On the contrary it drains the vitality, and when in contact with the lymphatics, may spread poison throughout the system. Abortion is strictly in order.

Any measure which tends to diminish the blood supply sent to, and held in, the affected part, will lessen the intensity of the process in the early inflammatory period.

First. The part must be put in a condition of rest and elevated. Every constriction to the returning blood current must be removed. How often do we see the patient come in with a red string tied around the diseased part above the inflammation.

Second. Cold applications should be applied continuously until it is clearly evident that the swelling is receding or is going on to suppuration. It should be a continuous application.

Third. If cold applications are not well borne, or it is impossible to apply them, compression should be used; this can be done by bandaging or in some places *collodion* can be used for want of better method. The bandage, however, should not be used after the earliest stages, as it might crush out what life there might be left in the surrounding tissues and thus make a bad matter worse.

Fourth. Heat will come in when the former methods have failed, or when the patient applies for treatment after complete stasis has taken place. If applied it should be kept at a uniform temperature while being applied and the application kept up for an hour or more at a time. When gangrene is present, the immersion of the part in a normal salt solution kept at as high a temperature as can be well borne for a period

of a day or more, will do more toward lessening the pain, stimulating the lowered vitality, and restoring the member than almost any other measure. In cases of old abscesses and ulcers such a measure is a valuable adjunct in the beginning of treatment. One case of an abscess starting in the palm of the hand, it was early lanced and then kept immersed in hot water an hour at a time. In a week from the start the hand was well.

Fifth. Early incision is a duty when suppuration is unavoidable. It brings quick relief from pain, causes the inflammation to decrease, saves the surrounding tissue from being inoculated with the poison, and makes an opening for the pus to escape. Medication can more effectively reach the root of the trouble. A carbuncle should be freely incised at the earliest possible moment. Whenever we have followed this course, the large portion of the infiltrated tissue has been saved and healing has been in half the time. *Ethyl chloride*, applied freely over the tissue, will obviate the necessity of using a general anæsthetic where only a quick cut or two is to be done.

In *chronic inflammation* the treatment is similar to the acute, viz., rest, elevation of part, pressure, and the use of the lance. Massage and the use of a mild galvanic current are valuable adjuncts. Three things are to be kept in mind: remove the cause, promote absorption of organized exudate, and establish healthy circulation.

When *suppuration* is fully established there are four cardinal features to be observed: 1st, thorough evacuation of the pus cavity; 2nd, good drainage; 3rd, rendering the cavity aseptic; 4th, antiseptic absorbent dressings to prevent farther infection. If the tissues show a loss of vitality too great to admit of these steps at once, then the hot water bath should be employed until vitality returns. Always should we work to conserve tissue and limit destruction.

Treatment of ulcers. The last step and the hardest is to restore the lost tissue. This means the covering of a denuded surface with new skin. This can be done in two ways: either by skin grafting or by stimulating a new growth. The former is not always possible, but is a wise step under favorable circumstances. The grafts will not always take. Always must the inflammation be reduced and the circulation be stimulated. The supplying of an artificial covering or dressing to the denuded surface until the deficiency is naturally supplied; a dressing that will cleanse, support, and stimulate the healing process; this is the hard question. Whether it will be moist or dry, must be decided by a study of each individual patient. Of the dry there are *boracic acid*, *iodoform*, *bismuth subnitrate*, *borated calendula*, and many others.

Among the moist dressings are the *cereate of zinc oxide, calendula, carbolic acid, mercury*, etc. We have found *vaseline* to be a most efficient base for ointments. Where the discharge is not great, a dressing of *boracic acid* with a cover of rubber sheeting and changed as rarely as possible, is most excellent. Do not change dressings too often. Another excellent covering is made of a piece of zinc bent to the form of the part and attached to a piece of copper on the other side of the limb. It acts like a miniature battery stimulating the healing process. It will reduce excessive granulations. Bandaging will also do this. Healing takes place most rapidly when air is excluded and the new granulations are undisturbed.

We trust this discussion will cause a more careful study and individualization of this class of slow healing and debilitating diseases.

SOME POINTS TO BE REMEMBERED.

1. Every case should be individualized and special symptoms noted.
2. Each case should be treated as per symptoms. Because two cases are diagnosed as the same is no reason that they should have the same treatment.
3. Remember that the treatment of the constitutional dyscrasia is more important than the external manifestation.
4. Every inflammatory process is debilitating and dangerous to the patient, hence should receive instant attention.
5. Early incision should be the rule, not the exception.
6. Large incision and thorough drainage is good practice.
7. Elevate the diseased part wherever possible.
8. Continuous immersion in hot salt solution will stop inflammatory and gangrenous conditions of ulcers.
9. *Picric acid* will almost instantly relieve the pain of burns.
10. *Borax* and rubber tissue is a par excellent application to ulcers.

Discussion.

In the discussion that followed Dr. Woodhull called attention to the value of rubber tissue in treatment of ulcers.

Dr. Reifsnyder had used a covering of tin in past years with great success, but the overcrowd of patients and lack of time had allowed the practice to fall into disuse. She used *ichthyol* as a dressing also *bichloride*. She reported a septic case of gangrene on the left side of the chest which had healed with marvellous rapidity. Oakum was used as an absorbent in this case.

Dr. Park uses *carbolic acid* injections to abort carbuncles.

Dr. Wittenberg injects *pycannin* for the same purpose.

Dr. Park uses lead plaster as a substitute for rubber; Dr. Lyon has used oiled paper; Dr. Butchart, the protective tissue prepared by Ferris Co.; Dr. Hsiao mentioned the wax paper folded around

photoplates; Dr. Cousland, the inner tube of old bicycle tyres; all first to be made septic.

Dr. Lincoln mentioned perforating ulcers of the feet as very resistant to treatment. Dr. Hsiao said they at Wenchow used hot fomentations for such. The latter also spoke of the treatment when the bone over the ulcer was enlarged. Dr. Butchart thinks skin grafting the only satisfactory treatment for this condition.

Dr. Lincoln asked for information concerning the relative values of lard on animal base and *vaseline* a mineral base. The latter often causes an excess of discharge, and the latter causing it to diminish. Dr. Butchart recommended dry powder dressings where there is an excess of discharge. Dr. Cousland uses sawdust bags, either plain or rendered antiseptic by Hg. Cl₂ 1-1,000. The *bichloride* bags (cotton cloth purchased locally) being coloured with an aniline dye to distinguish them. They form an admirably absorptive and cheap dressing.

Dr. Wilkinson has found that *vaseline*, dusted thickly over with *tannin*, makes a grateful dressing for carbuncles. Both he and Dr. Evans advocated flannel bandages as an excellent semi-elastic support for the varicose and debilitated condition of the affected parts.

Dr. Neal called attention to the paper in its advocacy of treating the constitutional weakness, and said that in a large number of cases he had found *iodide of potassium* a great help in speedy healing.

Dr. Woodhull, of Foochow, read a vigorous paper on benefits of air, sunshine, and hydrotherapy.

In discussion Dr. Kember told of a small sanitarium they have erected outside of the city of Hangchow and a hill, primarily for pulmonary patients. Patients in debilitated conditions had been greatly benefited there. They had also tried successfully full feeding. One drug, *carbonate of guaiacal*, 8 to 10 gr. doses tid., had given them excellent results in tubercular troubles.

Dr. Lincoln had successfully sponged down a case of high temperature in a typhoid case, and hoped that the object lesson had not been in vain.

Dr. Lyon was using Horlick's malted milk and condensed milk in place of using so many drugs.

The subject then turned to waterworks, and Dr. Wilkinson asked for the experience of others. He had been putting in a system. Dr. Maxwell has just placed a system in his hospital. He uses force pump power, as also does Dr. Reifsnnyder. The latter has an iron tank riveted. Dr. Cousland and Dr. Myers told of Dr. Otte, Amoy, who

uses windmill power, not only for water but for washing clothes, blankets, etc. Dr. Boone called our attention to the thousands who use windmills and tanks in America. Dr. Cox was using a tank in Yangchow, bought in Shanghai.

Dr. Woodhull in conclusion gave as good watch-words, "Cleanse and nourish."

MEDICAL EDUCATION AMONG THE CHINESE.

By P. L. McALL, M.B., Ch.B., Hankow.

This subject is one that has come up from time to time in the past; it is one that still claims a satisfactory solution, and it is one the importance of which it would be hard to overestimate. As is the case with the other uncivilized peoples there is in China an untold amount of suffering and misery endured by the sick, which is the result of injury and disease, and which in many cases is aggravated by the interference of their own doctors. We as medical missionaries hold that our chief aim is the extension of the kingdom of God, and on this ground, as well as on the grounds of philanthropy and the interests of the medical profession, look forward eagerly to the day when superstition, quackery, and malpractice shall be at least as rare in China as at home, and when reliable and skilful treatment shall be within the reach of all. And inasmuch as we desire this time to come we must also hasten it on as far as in us lies. It is our duty to see that in our day and generation as much light and knowledge is diffused and as much help rendered to the suffering Chinese as possible. By personal contact with the sick we can do something, but not nearly enough; it would require that our numbers should be multiplied many hundred times if the need is to be properly met. It is not sufficient for us to come to China merely to practise medicine; we must endeavour to provide means (1) for instructing the Chinese at large in the elements of health and (2) for the technical training of nurses and doctors. In this way on the one hand, much disease will be prevented, and on the other, we shall greatly multiply our usefulness by handing on a knowledge of the healing art to an everwidening circle of Chinamen, who will in their turn transmit it to others. Medical missions have been working in China for many decades now, and though at first the prejudice of the Chinese was doubtless so great that it was impossible to do much in the directions indicated above, it is a matter for deep regret that the Chinese are even now so ignorant of ordinary sanitary matters and that so few foreign-trained Chinese doctors are to be found

to-day. At the present time no one has such knowledge of the needs of the Chinese in these matters as we, no one has such opportunities of supplying the need, and therefore on no one does so much responsibility rest as on us for supplying it. Further, this is the psychological moment for doing so. The Chinese nation is now waking up from the sleep of centuries and finding herself hopelessly behindhand among the nations in all those refined arts and sciences which characterize a modern civilized nation. She is stretching out her hands in appeal to educated nations for light and knowledge. She has sent five thousand students to Japan to be educated. Schools and colleges started by the Chinese themselves are springing up with such rapidity that it is impossible to keep count of them. The feeling of the need of education is spreading like a wave over the land, and now is the time for the Christian church to come forward and supply the need under good influences. Knowledge the Chinese will get: if not from Christian sources—and by the by many of the Chinese prefer their sons to be in mission schools—then in government colleges manned by non-Christian teachers, and the chance for us will have gone for ever. To no branch of knowledge does the above more apply than to the healing art, which more than any other lends itself on the one hand to the uplifting of men and the advancement of God's kingdom, while on the other hand, it may be debased to the lowest and most degrading malpractices. Thus whether we consider the need of the Chinese for better medical treatment, or the desire of many Chinese for medical education, or the interests of our Master's kingdom, it becomes equally clear that we should take the matter seriously in hand. Nay, it is imperative on us to seize the unparalleled opportunity and lay the foundations of rational medical education among the Chinese on a firm and Christian basis. Realizing then our responsibility let us consider how we may best discharge it. The subject as hinted above divides itself into three chief heads:—

- (1). Education of the nation at large in sanitation, etc.
- (2). Training of nurses.
- (3). Training of medical students to become doctors.

[The first two of these are dealt with by me (P. L. McAll), the third by Dr. Gillison.]

GENERAL EDUCATION OF THE CHINESE AT LARGE IN SANITATION, ETC.

In the education of a nation it is not easy to state precisely where and when instruction in sanitary matters should come in. The fact is that in our own countries until quite recently very little attention was paid to these subjects and very little instruction given in them. But

with our present knowledge it is not too much to say that in the development of a nation this science claims a very prominent place. There is not much need to remind you of the urgency of the question in China; most of us are familiar with scenes like the following—a country pond, at one side is a latrine, hard by all sorts of refuse are thrown into the water; a dead dog is floating near, a little further on are the steps, whereby the water carriers come down to get water for domestic uses in the houses near, while close at hand are people washing their clothes or vegetables. Or take the case of a man who has broken his leg, and for lack of a little first aid in straightening the limb and applying a simple splint, the skin gives way, a compound fracture results, and the man's life is ultimately lost. Or take the utter carelessness shown when any one has an infectious disease, such as small-pox, no precautions are taken to isolate the patient, and the inevitable result follows that the disease has abundant opportunities to propagate itself. These every-day illustrations may suffice to show the total absence of the most elementary ideas on sanitation and first aid, and no one will deny that the time has come when the Chinese should be instructed therein. With regard to the means whereby this knowledge may be diffused, there occurs to me two chief methods:—

(a). Public lectures and (b) the publication of literature. Taking in the first place public lectures as a means of diffusing knowledge of sanitation, etc., this means is not to be despised. In large centres good lectures for upper class Chinese, illustrated by lantern slides and practical demonstrations, would produce splendid results being especially valuable because of the personality of the lecturer. But for the most part it is impossible to touch the public of China in this way, and so we must have recourse to literature that can be widely circulated. Articles in papers, magazines, calendars, etc., will all be of service, but probably hand-books on sanitation and first aid, etc., would be of greater and more permanent value. This leads us to a consideration of what publications now exist in Chinese on these subjects, and the first thing that strikes one is that practically there are no such works in existence. The fact is that although in religion, history, mathematics, languages, science a fair number of elementary works have been produced for the Chinese in the region of medicine we find a deplorable deficiency. I have recently endeavoured, without success, to find a book dealing in a popular way with elements of sanitation, etc. I hope I may be wrong in concluding that there is no such book in existence; at all events we are safe in saying that the need for such publications has not yet been fully met. Further on in this paper there will be occasion to discuss other medical

literature that has been produced or is urgently required, but here at the outset we cannot but recognize the need that exists for the preparation of a set of popular hand-books dealing with sanitation, hygiene, first aid ambulance work, etc. A proposal is made at the close of this paper as to how this need may be met; it is enough here to call attention to it. To sum up this head we may put it thus that the Chinese at large need to be instructed in sanitation, first aid, etc., and that this need can be attained by popular lectures and literature which should be prepared forthwith.

THE TRAINING OF NURSES.

Coming now to the second head there is again but little need to remind you of the importance of this subject. It is one of the greatest needs in our hospitals, for the proper care of the sick is impossible without a band of trained nurses; while as for private or district nursing as we know it at home, which rich and poor alike are glad to avail themselves of, such a thing, however desirable, has not yet come into the sphere of practical politics. In the meantime as a stepping stone to the ideal, and as an essential part of our immediate work, we will consider how the training of nurses may be carried out. And the first question to be solved concerns the sex, age, and qualification of persons to be trained. On the first point—that of sex—it seems best, lest we should put a stumbling block in the way of others, that the native nurses employed in men's hospitals should be men, and that the nurses in women's hospitals should be women. The day may come when the advantages of women nursing in men's hospitals will overcome the prejudice now existing against it. In fact the Japanese seem already to have advanced to this point, but at present it does not seem advisable for us to recommend such a course. The person selected for training as nurses should be of good moral character and preferably Christians, not only by profession but by practice. As regards age it is difficult to speak, for other qualifications come in more important. Nurses should be physically strong, should have had some preliminary education and be able to read Mandarin intelligently; they should be young enough to adapt themselves readily to new ideas, but old enough to be steady and reliable. Thus much may be said at all events for male nurses. As regards women nurses there comes in the question as to the relative advantages of having unmarried girls, or married women, or widows; probably the first and last are the most suitable, as their time is not liable to be interrupted by household cares. Coming now to the training of such helpers this is impossible except in connection with a hospital, for

nowhere is the importance of practice as compared with theory more clearly seen than in the training of nurses. And at the same time as every doctor is capable of instructing nurses, it is needless—perhaps also premature and impracticable—to think of establishing special training institutions. What is necessary can be done by us individually, taking as a basis some manual of nursery that commends itself to us and spending two or three hours a week in the actual instruction. In order to provide Chinese literature on the subject the Central China Branch of the Medical Missionary Association two years ago prepared a manual of nursing, the greater part of which has been translated into Chinese, and the publication of which we hope may soon be effected. This book may do something to supply the need in this department. And it is possible that this book, placed in the hands of a senior native assistant, would enable him to conduct the nurses' classes without much difficulty and with nearly the same efficiency as we could ourselves. Further, it is desirable that nurses should be instructed in the principles of sanitation and first aid as well as in the ordinary subjects usually dealt with in nursing manuals. The teaching would of course be of a very practical nature; it should not be crowded into a few weeks but rather spread out over a year or so in order that the several points may be thoroughly grasped and practised in succession. We may therefore summarize the above by saying that we in our hospitals and the Chinese at large need nurses; this need is to be met for the time being by teaching men and women in our own hospitals with the help of suitable text books.

We now come to the third section, dealing with how medical students are to be trained so as to become doctors. This section is dealt with by Dr. Gillison as follows:—

THE TRAINING OF MEDICAL STUDENTS IN MEDICAL MISSION COLLEGES.

By THOS. GILLISON, M.B., C.M., Hankow.

The Mission hospital has long held an honourable position as an agency of unique power in the spread of the Gospel of Christ, both in home and in heathen lands, and the medical missionary has little difficulty in commending his blessed work to the sympathy of men of all creeds and all ranks. What of medical mission schools and colleges? Can the medical missionary justify himself in giving up any considerable part of his time and strength to the training of medical students? We have no hesitation in answering in the affirmative, and in face of the vast need (a part of the subject that is dealt with by my colleague, Dr.

McAll) I conceive that in the training of medical students in our mission colleges the medical missionary is reproducing himself over and over again and greatly multiplying his efficiency to physically and spiritually benefit China.

Let us then consider some of the factors necessary to the successful training of medical students in the circumstances in which we as medical missionaries are placed. The subject may be conveniently considered under three heads :—

- I. Who should do the training ?
- II. Whom should we train ?
- III. How shall they be trained ?

WHO SHOULD DO THE TRAINING ?

The first answer to this is, Not every medical missionary should attempt it. No doubt all native assistants, dispensers, nurses, etc., employed by us in our mission hospitals, will pick up a great deal of useful knowledge, will learn to dispense and even to treat patients in a more or less satisfactory way by simply looking on and by being taught off and on as the doctor finds time. This has been going on in China for many years. Some of the men so taught have set up for themselves and have larger or smaller practices, and doubtless do better work often than the Chinese self-trained, self-styled doctors, but it is not to this class of training that we now refer. What we here mean by training is that the student should go through a complete medical course and pass the usual examinations just as we ourselves do in the home lands. We must aim at nothing short of this. Just as we now enforce on our home boards that we want fully qualified medical men and women (with honours if possible) to be our medical missionaries, so we must aim high for our native "medical missionaries to be". It is evident then that all medical missionaries cannot successfully engage in this work. And to begin with I should say that practically no man who is single-handed should attempt the regular training of students. His time is generally fully occupied with his hospital and other duties; the teaching is not only inadequate but is sporadic and so on. I will not waste your time by labouring this point. I think the case is far different where there are two medical men working together in one hospital. Many of the medical schools in China are so run to-day. It may be frankly admitted that it is not ideal, that it has many drawbacks, that two men are not enough to run a school at home, how much less here. True, but it has some advantages to make up for its drawbacks, e. g., it is a very easy and practicable method; devoid of

the throttlings of much red tape and cumbrous machinery, works generally very smoothly, and friction is reduced to a minimum. It is easy to begin in this way, even if it be regarded only as a step to something higher in the future. It is a good foundation on which to build later on. It has other advantages, however, and not least is that it is highly favourable for the gaining of a helpful personal influence over the students. This is a point to which we attach the very highest importance. We have tried it and can speak from a happy experience. Two men working together can often arrange and dovetail their work in such a way that they can accomplish much more than the work of one man multiplied by two. We heartily wish every success to such two-men schools and believe that some of the best students, for years to come, both in practical medical knowledge and in personal character, will be turned out from such institutions.

The question, however, arises, Can we get anything more advanced than the above? Is there any form of co-operation practicable whereby we may have a larger teaching staff? Of course preliminary scientific subjects, such as physics, chemistry, etc., need not necessarily be taught by a medical man. A teacher in a neighbouring high school might take these subjects, but beyond this, co-operation of missions in large centres is greatly to be desired. There are various ways of combining, but *no way will be effectual that does not materially increase the teaching staff*. Money is not the difficulty; fees will meet that in due time. What is counted is a regular, constant supply of medical missionaries as teachers on the staff of the college. To my own mind no plan is so simple or so practical as that in large centres where several societies are working together; each society should support at least one medical missionary, who shall lecture regularly to the students in the college. Four or five lecturers could thus be secured, and the initial expenses should be equally borne by the co-operating societies. The institution would soon be self-supporting. Other plans may be suggested by my hearers, but I doubt if any will prove more feasible than the above. We should like to hear from those who have tried any other plan. I have purposely omitted going into details, as these can be very easily arranged when once three or four societies agree each to support a teacher in the school. One might perhaps just mention, without going into detail, one or two other possible solutions of the problem. (a). By one mission superintending the school and taking all financial and other responsibility, but getting teaching help from medical missionaries of other societies, certain privileges as in regard to students from co-operating missions being received at reduced fees, etc., being granted in return for help rendered.

(b). Say two missions in the same centre each have a branch of the school centre, but teach half the subjects in one school and half in the other. The burden would rest less heavily on each by this plan.

(c). An undenominational mission, such as the Yale Universities Mission, take up the work thoroughly—man it well with three or four first-rate men—and other societies send their students there.

Whatever plan be adopted there is one thing I would urge, and that is that much help might be gained by having a common standard of examination by which to gauge the scholarship of the men and unify the teaching throughout the empire. Some would make this standard a very high one, some too low; and some a medium one. If practical men, who have had to do with teaching and not mere theorists, are chosen to fix the standard I believe much good would result from its adoption.

WHOM SHALL WE TEACH?

In this as in all other points we must be practical. Any one can sketch for you the ideal student—the man of splendid Christian character, with a first knowledge of the classics, also of arithmetic, geography, science, and English, and not more than twenty years of age. Where shall we get a sufficient quantity of such prodigies who are willing on the top of all the above education to add a five years' medical course? How many medical schools would exist in China to-day if only such men had been taken on as students? I leave those in charge of schools to answer the question. I will state briefly what I think should be our aim in seeking for men. Firstly, I should say the great aim must be to make a start of some sort. You cannot afford to be too particular at first, you can improve as you go on. Don't lay down such rigid rules as will strangle you before you begin. Get together a fair number of young men, from seventeen years old and upward, who have at least a moderate knowledge of Chinese, can write from dictation, and are of good average character, preferably Christians, though I should not reject non-Christians, nay I welcome such. If besides they possess some of the higher qualifications mentioned above, so much the better; if not, then take them on and make a beginning. You can raise the standard for admission each year as the demand increases; in time indeed perhaps we shall come to the model with which we started. Try and get students who themselves wish to study medicine, and not those who have been pressed into the college by their parents or others. We have had several disappointments just from this cause. Again I would recommend that there is safety in numbers. Do not aim to have too small a school, for if two or three of the men fail you your

school is gone. In our own case we began three years ago with eleven men; this year we finish with sixteen men, but only four of the first eleven are left. The second year we took on five, and of these four are left, while all the eight men taken on in the third year were with us at the close of the year. So much for the men to be taken on as students.

HOW SHALL WE TRAIN THESE MEN?

Under this heading we shall consider briefly the practical details of the working of the school, e.g., the language to be used in teaching, the course (its length, arrangement, lectures, books required, examinations, fees, diploma, etc.).

Language.—From the preceding remarks it will have been seen that I have assumed that the teaching shall be in the Chinese language. There are strong advocates that all teaching should be in English. The arguments used are as follows:—

1. The difficulty of teaching in the Chinese language, nomenclature difficulty, and so on.
2. The scarcity of teachers sufficiently competent to teach in Chinese, while all or nearly all could teach in English.
3. The student taught in Chinese could not keep up to date in current medical literature. Nor could translations of new works into Chinese keep pace with the onward rush of medical progress.

Granted that there is much truth in all these points, I still maintain that there is very much more to be said against the teaching being in English than there is in favour of it.

1. Is it not an insult to this great and practical people to insinuate that the language which has served them, for so many centuries, is incapable of use in the teaching of the healing art? The language will expand and become enriched just as our own Anglo-saxon has done; indeed the process has already well begun, but to say it cannot be used will not be agreed to by those who have manfully tried the experiment. The difficulty is there to be overcome. "Let not fears your course impede;" go ahead, master the language, and let your teaching work into the life of the nation to whom you have been sent. English for the favoured few, Chinese for the many, and it will take a multitude of physicians to minister to the sicknesses of this great people.

2. The students we train must speak to the people in their own language, and we wish to convey correct scientific ideas to the people through our students. This cannot be done in the English language. I could say more on this point, but time forbids.

3. To teach in English reduces the chances of our obtaining a sufficient number of satisfactory students. How many students are there in our Christian colleges with an English education of such a high standard as to be able to read intelligently a medical work? Very few I trow, and of these few how many are willing to spend four or five years of further toil to obtain a medical degree when lucrative paths because of their knowledge of English open to them on every side? What impossible salaries too they would want when they got through, and then if they found the work a little stiffer than they expected, or something caused them displeasure, the stimulus to leave is a great one, away they fly to a business life and leave medicine far behind them. I do not say that there is no room in China for medical schools taught in English, but I say they must be the exception and not the rule. In Hongkong and Shanghai, and perhaps in Tientsin, such a school might be practicable, but I think the majority of medical mission schools should for the present be taught in the Chinese language.

The Course.—This should include all or practically all the subjects taught in the home course, e. g., anatomy, chemistry, physiology, materia medica, pathology, bacteriology, surgery, medicine, midwifery, gynæcology, medical jurisprudence, public health, eye, ear, and throat diseases, etc. Of course more attention will be given to some of these branches than others. I have not time here to enter into detail, but I consider *five years'* systematic and clinical instruction to be the shortest period in which the work can be got through. Where there are only two medical men teaching in the school some dovetailing of classes will have to take place if the taking on of students is to be continuous, i. e., from year to year. As an example the first batch of men taken on can be taught in their first year the anatomy of the arm, leg, and thorax, plus chemistry. In their second year the anatomy of the head, neck, and abdomen, plus physiology and histology, and in this year the new men can take this section of anatomy, physiology, and histology as their first year's work, and the other section of anatomy, plus chemistry, as their second year's work. This may not be ideal, but the plan works as we have found from practical experience. The plan must be modified for the third, fourth, and fifth years' men. There it can only be partially adopted.

Examinations.—It is well to hold class examinations, both orally and in writing, about once a month; this keeps the men revising their work and gets them used to our mode of examination, so that when they come to the professional examinations they are in a better position to tackle

them without nervousness. These professional examinations should, we think, for the present be held once a year, at the close of the winter session, i. e., supposing as in the case of our Hankow school, students are only taken on once a year, at the commencement of the spring term.

It is well to get outside examiners to set the papers and to conduct the orals, this gives the public greater confidence in the thoroughness of the work done in the school.

Lectures versus Books.—There are many who advocate teaching by original lectures as far superior to the use of any particular text-book. This sounds well, and a few very superior men may be able to carry it out, but when it is considered that one man has to teach at different times perhaps as many as three or four subjects, it is not practical politics. I believe in the use of a text-book. It saves much time and labour, which is a matter of great moment to the over-worked, and the use of a text-book which has already been translated into Chinese is to be preferred, though it may be amplified from the reading or experience of the lecturer and need not be slavishly followed.

We should like to put in a word in reference to the need for more translations of text-books into Chinese, good, easy Wên-li preferred, and we would plead with those who have the time and the ability to do this work that they would devote their energies to standard works, such as might be considered to cover sufficient ground to prepare a student thoroughly for his professional examinations. We have a few such works, but all too few. Much time has been spent on preparing works which are not adapted for teaching in any regular course. A good surgery, a good materia medica, a good book on medicine, are all prime requisites at the present time, also text-books on public health, medical jurisprudence, bacteriology, etc.

Fees.—Opinions will vary much on this subject, but once more we say "Be practical". Do not stultify yourself with too stringent rules at the start; stiffen up your regulations as you go along. We have found it easier to get fees as we grow older as an institution; this last year having been the most satisfactory of all. Do good solid work and there will be no difficulty about fees. You will soon be able to command your own terms and make the school self-supporting. It may be well that a number of Christian young men, whom you wish to employ in the mission, should be permitted to enter on payment of part fees, on condition that they give a few years' service at a small remuneration to the mission in return for this reduction in fees, e. g., suppose the fees

to be \$60 per annum, a certain number of Christian students might be taken on at \$30 per annum, in return for which they would promise to give four years of service in a mission hospital at reduced salaries. Thus the hospital expenditure would be lessened on the one hand, and the student would be gaining additional clinical experience on the other. Shall we not expect too that many will elect to serve in mission hospitals, not because bound by agreement but from love to the same Master whom we serve as medical missionaries?

A word in conclusion. Where shall these men go when trained? Some will go to make money as a main aim, some, nay many, will go forth as Christian physicians, engaging in private practice, and while earning an honourable livelihood, will also bring not only bodily healing but also words of spiritual love, cheer or warning to their fellow-men. Some too will help in our hospitals, and some be tutors or even lecturers in our medical schools. What a new vista opens out before the medical missionary of to-day; my soul leaps with joy at the prospect, never so bright as now. Let us buckle on our armour for this great undertaking, and medical missions shall take a greater share than even in the past, in the glorious work of bringing China to the feet of the Saviour.

Resolution re Medical Text-books.

In the above paper we have referred from time to time to the need of a complete set of standard text-books in Chinese, both of a popular elementary nature, such as works on sanitation and first aid, and of a technical and professional nature, such as books on nursing and all the subjects comprised in an ordinary medical course. We gladly recognize that many valuable standard books have been already prepared, but we are also from time to time reminded of the fact that on many subjects there is as yet no suitable work to hand. It is greatly to be desired that popular and professional medical literature in Chinese should be complete and up-to-date, and for this purpose a complete set of text-books is required and a medical magazine should be prepared. And so *we recommend* "that this conference appoint a sub-committee (1) to carefully review the whole field of medical literature, to select therefrom a set of standard books dealing with every branch of the subject, and where necessary to secure from among the medical missionaries competent translators for the works chosen; (2) to make arrangements for the periodical publication in Chinese of a medical journal dealing with the progress that is being continually made in medical knowledge."

Towards the furtherance of this scheme the work that the special Nomenclature Committee has done and is doing will be of the greatest

possible value. If such a proposal as the above is passed by the conference and carried out, in a few years' time we shall have a complete set of text-books in Chinese, which will be invaluable as supplementing and crystallizing oral instruction in our schools, and which will greatly help forward medical education among the Chinese.

THE ADVANTAGE OF USING ENGLISH IN TEACHING MEDICINE TO CHINESE STUDENTS.

By T. K. STAU, Wenchow.

So much as we wish China for the Chinese, still more we naturally want our own language. Any student is expected to learn and read things much more thoroughly from books in his native tongue than that of a foreign language. And it may strike you as strange if I am here to say that there will be more advantage and reason in learning or teaching this foreign art in the English language. Will those who are here to-day, not holding this view, kindly divest themselves of their opinions for the time being and try to look at the other side of the question.

By teaching medicine in English it is understood that the new student of medicine, on joining, is expected to have an English education as the basis on which he is to build the medical art. The student who knows English has great facilities for reading comprehensive text-books and all the literature that there exists of this profession. With an English education in contradistinction to an ordinary education in the Chinese classics, the student abandons all superstitions and acquires for himself better reasoning powers. He has also noted, during his days in elementary science, that benefits are only obtained by a series of careful observations; by this training he is anxious to be systematic, and he struggles for the benefits of cleanliness, and so becomes a more receptive student when he begins the study of medicine. In practice later on he will be more thorough and observant and more conscientious in carrying out what he has learnt of the rules of cleanliness, a great desideratum, especially at this period when we all believe in aseptic surgery.

I have said he has the privilege of reading the whole literature of his profession. He can avail himself of any of the medical journals to keep himself up-to-date. We know that a graduate of any science or art cannot carry all details of that science in his brain, but he has a knowledge of where he can find help in time of difficulty. In the case of the medical graduate what book will help him to arrive at a conclusion,

diagnose a disease, and prescribe for its treatment. Knowledge obtained, when one finds oneself in the lack of it, is more firmly impressed on the memory than that acquired during one's college days, or at the time when one stands nearer to the patient and bears the responsibility of life and death. One becomes experienced by means of what is observed and read.

Before going further may I ask: if the promoters of the central medical school in China are cherishing a hope that those whom they educate will some day become independent doctors, supplanting the native Chinese doctors, or are they expecting just to qualify them to become assistants in missionary or other hospitals? I have ventured to speak on this subject, having an ambitious hope that the art of healing may be practiced as scientifically as is possible in this country, or otherwise I would have not brought forward this subject, knowing that in order to produce ordinary assistants a superficial knowledge is all that is needed. A mere assistant would be given no task of responsibility, and therefore he need not be provided with a library of medical books.

A Chinese student admitted into the medical school, with a good or fair knowledge of Chinese, but without previous hospital experience, would find it very difficult to receive all the strange theories his teacher gives; he has a difficulty in many cases even to understand the Chinese the English professor is speaking; one year studying a bone by one name and the next he is expected to remember another. He is bound to pick up some English to enable him to read the prescriptions at least, for I cannot be exaggerating when I say that there are no English doctors in China who ever prescribes in Chinese, and also he has to know the English name of many other things. At the end of his term, after he is given a certificate and perhaps he starts as a doctor in some locality, he soon finds out his own ignorance, and away from his teachers and without comprehensive text-books he is now as "seed sown upon a rock, which as soon as it was sprung up, it withered away, because it lacked moisture." If he wishes to keep a good conscience he can keep continually prescribing the same simple medicine. But if he might add to his knowledge by reading the works of great men how much more useful to succeeding generations he might become; without such reading he will hardly become a scientific doctor. His teachers, instead of producing a better doctor from such schools for China, have but added another to the old lot.

A few remarks about medical missionaries may not be out of place. It is, I think, obvious that if they teach in English, they are more economical with their time and produce more efficient students. You all know yourselves better than I can describe to you that a medical missionary

is truly a busy man. He is physician, surgeon, chaplain, sanitary officer, general superintendent, accountant, etc., etc., of the hospital, and sometimes has even other duties. But if the medical missionary is to teach in Chinese he has to study the Chinese language, besides he has to know all the technical medical terms he is expected to teach. As at least two years of such study are necessary he cannot be a teacher until after that period is elapsed, and by the time he can speak plainly he goes home on furlough, and in some cases never returns, and the new doctor who succeeds has to repeat the programme with a long interval between, whereas if he were to teach English he would be able to take up his task immediately and express to his pupils all he wants to say.

Those who do not believe in teaching in the English language think "it is educating the students away from the people, and creating an exotic plant destined to wither up when brought into contact with the tones and aspirates of the Chinese life." I can only say that the art itself is foreign. The point in this case is that the student acquires his knowledge of the art through the English language. Later even if his English is withered up, his art lives with him. It is this that you are to plant firmly and they are to practice.

All well-wishers of China hope that some day—the sooner the better—the Chinese people will be an educated race, sufficiently enlightened to appreciate the benefits of foreign medicine. This big task we must leave to the Chinese government. And it is also her duty, when the time comes, to dispatch students to Western countries to acquire the knowledge of this science; these students, in their turn, will become scientific medical practitioners and provide medical literature in the mother tongue for another generation.

I only hope that meanwhile medical missionaries in China will use their best endeavors to impart a knowledge of their profession to those who are most deserving and those who will give good and substantial results to their own countrymen. In my opinion students with an English education can do this best.

Discussion on Medical Education.

Dr. Watson explained the present status of a union medical college in Shantung. Several physicians there have agreed together and each teaches one year's work in a continuous course, the students going to each hospital in turn a year at a time.

Dr. Eubank spoke for those who have had little opportunity to gain a working knowledge of the Chinese language and welcomed the opening of union medical colleges.

Dr. Cousland outlined his course of study and lectures given to the Chinese assistants in his hospital. "English for the favored few and Chinese for the many" (quoted from Dr. Gillison) was his view of the language question. Every medical missionary ought to teach his assistants as much for his own good as for the assistants. He exhorted new missionaries not to be discouraged because they had not such good buildings as at the old stations. Splendid work could be done in a native house.

Dr. Hsiao suggested a dictionary of nomenclature for the Chinese who do not read English.

Dr. Woodhull told of her use of blanks which cause the Chinese to more carefully enquire into the condition of her patients and greatly economises the time of the foreign physician.

Dr. Watson introduced the project of teaching practical obstetrics to Chinese women of good Christian reputation, urging the formation of classes in midwifery, believing that it would do much to relieve the suffering of Chinese women.

Drs. Lyon and Woodhull had had the subject under consideration and Dr. Reifsnnyder told of the work of Drs. Niles and Fulton, of Canton, in this direction by using their graduates.

Dr. Wilkinson gave his method of inducing young men of the better classes to study medicine. He would offer them no salary, but teach them, and they in compensation became assistants in the hospital.

Dr. Park mentioned a turtle at Soochow celebrated for his cures of diphtheria and described the manner of using him.

The use of antitoxin in diphtheria was discussed by Dr. Hearn, who believes that when used early in doses from 2,000 to 3,000 units is a true specific; and when given to exposed persons in doses of 1,000 units becomes a true prophylaxis.

The rarity of this disease in certain parts of China, such as Shantung, Northern Kwangtung, and in Swatow, was mentioned by several.

Dr. Watson gave a review of a crusade in a city in England made against the disease some years ago in which he took part and gave the statistics. No tracheotomy had to be performed, and the per cent. of deaths was two per cent. Antitoxin was the chief remedy used.

Dr. Butchart had seen the disease in Nanking among those coming in contact with foreigners. In the interior he had rarely seen a case, but believed there were such only they did not come to the clinics.

Dr. Shields mentioned a New York hospital where, after careful trials of all recommended swabs, they had come to the continuous use of simply salt and water.

Medical and Surgical Progress.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M. D.

A NEW TREMATODE.

Probably the most important recent discovery as affecting medical missionaries among the Chinese is that of a new trematode in an inhabitant of the Fukien province.

The discovery was made by John Catto, M.B., D.Ph., after whom Professor Blanchard has named the new helminth *schistosoma cattoi*.

The worm was found in a Chinese patient—a quarantined coolie—who died of cholera at Singapore.

A full account is published in the *British Medical Journal* of January 7th, 1905, from which these notes are taken.

Briefly the physical signs and post mortem appearances were as follows:—

Adipose tissue throughout the body was a prominent feature, abundant in every natural situation and in some places forming a regular coat to the bowels. The appearance of the peritoneum suggested repeated attacks of peritonitis. The mesenteric and prevertebral glands varied in size from a bean to a golf ball. The liver was enlarged, and presented the appearance of coarse cirrhosis.

The colon was much thickened throughout. The mucous membrane was swollen, hyperæmic, and friable, presenting numerous small circular, superficial erosions and patches of necrosis. The outer coats were very tough, almost cartilaginous, and showed no tendency to ulcerate.

The rectum was three quarters of an inch thick all round, and nearly filled the true pelvis. The sigmoid was uniformly thickened;

in tracing the bowel upwards the thickening became less marked and more patchy. The coats of the cæcum and appendix were uniformly hypertrophied, the mucous membrane presenting small patches of ulceration and necrosis. A distended lymphatic ran along the free surface of the appendix. The lower end of the ileum was thickened in patches and the mucosa congested over corresponding areas.

The parent worms are found in small groups at the bifurcation of the smaller mesenteric vessels, and partially or completely plug the vessels. The male is 9 m.m. long by .5 m.m. broad, of a light brown colour. They closely resemble *schistosoma hæmatobium* (bilharzia).

A distinctive feature is the absence of the ciliated warts on the integument, the presence of which constitutes so marked a feature of the African worm. The eggs are yellow-brown in colour, oval, measuring on an average 70 u. long by 40 u. broad. They have a stout smooth shell. There is no trace of a spine or operculum. They contain cellular contents. In no one of the ova could distinct embryos be detected.

The ova differ from those of the *schistosoma hæmatobium* in their colour, shape, size and in the absence of a spine. The bilharzia ovum is of a brown colour, contains a well developed embryo and is larger (19 u.). Its ends are more pointed, and it is provided with a spine.

Where ova accumulate they provoke at certain places a small celled

infiltration, which gives place later to a great proliferation of fibrous tissue. In the intestine from cæcum to anus the ova occupy roughly two concentric layers: the one subperitoneal, where the ova are comparatively scarce; the other in the submucous coat, where they are innumerable, in some cases densely packed. Ova are plentiful in the mucosa, are more numerous in the necrotic areas, and are seen apparently in process of extension at the margin of an ulcer.

Of the intestinal tract the rectum and appendix are most affected; the distended lymphatic vessel in the appendix already referred to is choked with ova. Everywhere throughout the small intestine ova were found, but only in patches and in relatively small numbers. In the liver the ova are plentiful, lying singly or in large or smaller clumps embedded in the markedly hypertrophied fibrous tissue. In many of the enlarged mesenteric glands ova were found in the thickened trabeculæ.

In addition to the differences already noted there are certain other points which serve to differentiate the species.

1. The habitat of *S. hæmatobium* is reputed to be venous only, whereas the habitat of the new schistosoma is mainly arterial.
2. The ova of *S. hæmatobium* affect mainly the urinary system and escape from their human host by this channel. In the new species the ova apparently affect exclusively the alimentary system escaping by this route.
3. The geographical distribution differs, for no case of bilharziaris has yet been met with in China.

One further note we specially should pay attention to. That this case is unique is extremely improbable. When proper search has been made doubtless many additional cases will be found in the natives of the endemic districts.

The ova have probably been found many times in the course of ordinary microscopical examination of fæces, but have been mistaken for the ova of *ankylostomium duodenale* which they closely resemble.

Hygiene and Physiologic Medicine.

Under the charge of KATE C. WOODHULL, M.D.

Abstract of an article on "Sunlight and Solarization in Health and Disease", by E. C. Angell, in *The Sanitarian*.

According to Plutarch, when the youthful Alexander visited Diogenes at Corinth, he found the famous cynic tranquilly lying in the sun. The warrior affably saluted the philosopher and asked if he could do him any service.

"Only stand a little out of my sunshine," replied Diogenes. This incident occurred when the renowned Athenian had reached the age of "three score and ten"—long past the eccentric days of his life in a tub and his day-light lantern searches for an honest man; and there

is good reason to suppose that he really valued the invigorating rays of the sun more than any boon Alexander could give.

Among the Romans the two Plinys accustomed themselves quite as much to the sunshine as did the sensible and shrewd Diogenes. At their country seats they had gardens bordered with thick hedges, where they could walk nude, thus immersing the whole body in the solar blaze. In fact the love of sunshine was a marked feature of old Roman life; the dwellings being generally provided on the roofs or southern walls with balconies or terraces, called *solaria*, where the

occupants, sitting or reclining, could sun themselves at their ease.

This use of light was rather prophylactic than remedial. The therapeutic efficacy of sunshine, however, was by no means unknown to the ancients. Hippocrates, Aurelianus, and Celsus speak of the benefits of sunshine in disease. For upwards of two thousand years, from time to time celebrated physicians have written theses, acknowledging sunshine to be a therapeutic agent of great efficacy and value. Nevertheless, it remains indisputable, that so far as this remedy is concerned, we are still on the threshold as regards both practical and scientific knowledge. The reason of this is not far to seek. In exhibiting the solar ray the medical practitioner is dealing with an agent of dangerous potency, of unusual exclusiveness, and of great complexity. To appreciate the complexity of the agent in question we have only to recall the fact that the sunbeam is resolvable into rays of various colors, mysteriously embodying in different proportions the two great forces of light and heat and the third subtle form of energy, known as actinism, which is essential to the chemical miracles of photography and which within the past few years have been found quite as miraculously potent in heliosis, or solar therapeutics.

The sun has been, and not without reason, practically deified by the high priests of modern science as the god of force, the Hercules of the nineteenth century. As the enthusiast Tyndall eloquently wrote: "There is not a hammer raised, a wheel turned, or a shot thrown that is not raised, turned, or thrown by the sun." And he might have added: There is not a seed quickened, a plant nourished, perfected and vitalized except by the sun.

Nevertheless, this system of things is so poised that like the

lightning's flash or the sweep of the tornado this great power may become a destructive curse and the seed may shrivel, the plant wither, the animal perish from excess of the very force, without which it could not exist. With human beings the trouble generally is that the pernicious effects of an excess of solar light and heat are so sedulously avoided that we err in the opposite direction, and it is quite safe to assert that in civilized countries three persons out of four are suffering from insufficient solarization, which term may be employed to denote the total beneficent action of the sun's rays on the human system.

One of the great problems in solar therapeutics is to so regulate the thermic heat force as to avoid annoyance or injury from its effects upon delicate constitutions while receiving the full benefit of the luminous and particularly of the actinic element in the sunbeams. These elements are of the utmost importance, and so far as their beneficial effects upon the human system are concerned they are practically unobtainable from any artificial source. Every conscientious and intelligent medical practitioner might well ask himself the question: Do my patients receive enough of the peculiar vitalizing influence which is lodged in the solar rays, and if not how can it be most easily and safely administered?

There is no doubt that many physicians, who are quite ready in theory to admit that sunshine is a valuable remedy, are in practice deterred from resorting to it through apprehension of some of the undesirable and often serious evils which in ordinary life it too often occasions. Such a course, however, is very far from wise. As soon should the physician think of banishing opium from the *materia medica* because of the deaths for

which *laudanum* is responsible and the long train of miseries arising from the opium habit. He simply prescribes it with increased care, and taxes his inventive powers in contriving means to secure its benefits and avoid as much as possible its deleterious effects. Precisely this policy should be pursued with reference to the rays of the sun, and the physician may inspire himself with the thought that if he or his patient should chance to acquire the "sunshine habit", it would prove as advantageous as the opium habit is destructive.

Not only in tuberculosis, scrofula, chronic dyspepsia has special solar medication been effective, but also in surgical cases there have been decided beneficial results. The following is the report of a case treated in Bellevue Hospital by Dr. Stephen Smith: "A young man, suffering from disease of the ankle joint and of the tarsal bones, was admitted, so enfeebled that it was decided that he could not survive amputation. His symptoms were those of septicemia. The patient was much emaciated, his skin pale and bathed in cold perspiration, his ankle the seat of profuse suppuration. I directed that his entire body be exposed to the sun each day. He began to improve immediately, his sweating ceased, the skin became bronzed and firm, his general condition changed for the better, and the local disease began to improve. He was soon well enough to have excision of the diseased bones, gained a useful limb, and I have no doubt owes his life to insolation."

I would take the liberty to urge an increased attention to solar therapeutics on the part of the medical profession, for the sun's rays may be employed with absolute advantage, and if proper care is taken with as absolute safety.

Whenever the blood is impoverished and the red corpuscles are

few, whenever the vital forces are weak, whenever convalescence is slow without obvious cause, plunge the patient into sunshine as strong as can be borne and as constantly and as continuously as possible.

In asthma, bronchitis, catarrh, dyspepsia, gout, malaria, or rheumatism, and above all as a means of saving the stout from fatty degeneration, in many acute and in nearly all chronic maladies, insolation is richly worth repeated trials and offers fair promise of excellent results.

Sun baths, or apartments in which the solar rays can fall upon the naked body, could easily be constructed in our houses and hospitals. Let us then, to use the words of the dying Humboldt, have "mehr light."

THE ICE BAG IN APPENDICITIS.

Properly employed there is no means of controlling inflammation so effective as the ice bag. On the other hand, when improperly employed, it is equally potent for mischief. There are two things which require especial attention in the use of the ice bag. First, the application must not be prolonged without interruptions at least every twenty or thirty minutes. The effect of the ice bag when applied to the skin is to cause contraction of the blood vessels in deep-seated parts which are reflexly connected with the skin surface to which the application is made. This contraction is brought about by reflex stimulation of the vaso-motor centres. When the ice bag is applied so long as to benumb the skin, the reflex action ceases and the blood vessels dilate, thus producing an effect the very opposite of that which is desired. Hence the ice bag must be removed every twenty or thirty minutes for a sufficient length of time to allow the natural heat of the skin to return. This

restores the sensibility of the nerves and renews the reflex effect. When the ice bag is removed a hot fomentation should be applied, thus increasing the activity of the skin and the sensibility of the nerves. The fomentation has a further excellent effect, in that it exerts an inhibitory influence over pain, that is, "heat kills pain." Cold has a tendency to increase pain; so the use of the fomentation in connection with the ice bag is a means by which the good effects of the ice bag may be obtained and any possible unpleasant effects counteracted. The hot application may be applied over the ice bag; that being covered with flannel and a piece of mackintosh so as to prevent the too rapid melting of the ice, or the heat may be applied to some remote part. For example, if an ice bag is applied to an inflamed tube or appendix, a fomentation may be applied across the pelvis or upon the hips; or if the pain is severe blankets may be wrung out of hot water and wrapped around the hips and legs; or a hot foot bath may be administered. A very good means of continuing the effect of the fomentation is to wring towels very dry out of cold water, wrap these about the legs and wrap each leg separately in flannel. The wet towels are quickly warmed by the heat of the body and remain warm. A large amount of blood is thus drawn away from the congested, painful part. Hot bags may be placed around the legs to intensify and accelerate the heating. By these hot applications the inhibitory influence of heat over pain makes the patient very comfortable while the ice bag is combating the inflammation. It is very important, however, to remember to take off the ice bag every twenty or thirty minutes and apply a fomentation to warm the parts.

Two cases will serve to illustrate

the beneficial results of this method of procedure. Within less than a week of the present writing the writer was called to see in consultation a patient who had suffered several attacks of appendicitis, and was lying in bed for a few days preparatory for an operation for removal of the appendix. On the morning of the day when the writer was called, the patient had a very severe chill, with severe pain in the region of the appendix and the ordinary symptoms of the disease. When seen there was a large hard lump in the region of the appendix, which was extremely painful, and the temperature was 103.7° . This certainly looked rather unpromising; but the results of immediate operation in such cases are so often unfavorable that it was decided to try the ice bag for a few hours at least.

The nurse was given the following directions: Apply hot hip and leg pack for ten minutes with ice bag over the appendix. After the hot hip and leg pack, apply to the legs towels wrung out of cold water and wrap each leg separately with mackintosh and flannel very warmly. After the towels are warmed, apply the ice bag over the appendix again. Remove the ice bag every thirty minutes and apply fomentations for ten minutes, replacing the ice bag at once while the part is warm. Give a large hot enema every four hours. Withhold all food for forty-eight hours. Under this treatment the patient's pain was rapidly relieved, and by morning the temperature was 100° . The temperature rose to 101° the next evening, and the following morning was normal. The patient has had no further pain. The swelling has almost wholly disappeared. Slight tenderness remained, but the patient will in a few days be ready for a radical operation for removal of the appendix and under conditions

which will promise good prospects of success.

Case No. 2 speaks with still more emphasis in favor of the ice bag. The patient was a boy, had been ill twenty-four hours. Pain very severe, vomiting almost constantly. Temperature 102° , pulse 120. An operation had been thought necessary, when it was proposed to try

the ice bag. The same line of treatment was followed, which has just been described. The result was that in a few hours the vomiting ceased, the pain disappeared, the temperature became normal, the pulse 96. He was soon feeling so well an operation was considered unnecessary.—Editorial in *Modern Medicine*, December, 1904.

HYDROGEN DIOXIDE IN FORM OF A STABLE POWDER: SODIUM PERBORATE.—Jaubert in the *Bulletin de l'Académie de Médecine, Paris*, December, 1904, announces the production of a powder which, dissolved in water, generates pure hydrogen dioxid. The powder is obtained by the action of *boracic acid* on *sodium peroxid*, and he proposes to call it "*sodium perborate*." The peroxid of hydrogen generated when this powder is dissolved in water is chemically pure, and its action is reinforced by the antiseptic properties of the *sodium borate*. Two pounds of the *sodium perborate* contain nearly 80 liters of active oxygen. The powder keeps perfectly and can be applied dry to wounds, cavities, etc., the nascent oxygen escaping as it comes in contact with the secretions, or it can be dissolved and thus produce a fresh and potent supply of hydrogen dioxid as required. The perborates of zinc, strontium and calcium can be made in the same way. Robin supplemented this communication with a reference to his suggestion that hydrogen dioxide be used for the water of crystallization, with reiteration of the importance of the nascent state for efficacy of drugs.—*International Therapeutics*, March, 1905.

The China Medical Missionary Journal.

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Editorial.

THROUGH NATURE TO GOD.

Missionary enterprise until within a comparatively recent period confined its energies to relatively few lines of effort. In the beginning it was entirely evangelistic, but in a very few years the needs of medical and educational work were so urgent that those branches have developed simultaneously with the growth of the church until, with the exception of a small and unprogressive minority, their value is heartily recognized and their assistance cordially sought by Christian workers in heathen lands.

An attractive little report from a remote station of the C. I. M. in Sui-ting-fu, Szechuen, abstracts from which will be found elsewhere, tells us what a versatile medical man, while laying the foundations for his work, is trying to do in the way of overcoming the ignorance and superstition of this great people by teaching them of the wonders of God's world and the manifestations of Him in nature. Surely this is an example that some of the more isolated would do well to follow. All may not have the material resources or the versatility of our West China brother, but here is certainly a demonstration of university extension which many a good man in the interior might emulate with advantage.

With all our heart we wish Dr. Wilson God-speed in his popular science course. Such work done in the Spirit and name of our Redeemer will surely not return to Him void.

OUR NEXT CONFERENCE.

The secretary of the Corresponding Committee of the Centenary Missionary Conference of 1907 writes in a somewhat agitated frame of mind to the secretary of this Association on account of the intended proximity of our respective meetings.

The real crux of the situation seems to be the fear that, on account of the limited accommodations in Shanghai, the two meetings coming close together will be too much of a tax on the hospitality of the community, and that one or the other, presumably the latter, will suffer.

As it is not yet definitely decided whether the Centenary Conference shall be a general one or for delegates only, the letter from their secretary and the editorial calling attention to the matter, are held over till the July number when, we trust, the matter can be settled.

HONOR TO WHOM HONOR.

The well-known house of E. Merck, Darmstadt, has recently received two distinct honors. Dr. Willey Merck has received from the University of Halle the degree of Doctor of Medicine (*honoris causa*) for his merits in the field of *materia medica*.

The house also received the highest award for its pharmaceutical exhibit at the St. Louis Exposition.

With such houses as the Mulfords and Parke Davis in the field, the winning of the award by the German firm speaks volumes, not only for the excellence of their exhibit but also for the fairness of the awarding committee in not allowing its national bias undue scope.

STATISTICS.

Again we wish to remind the members of the Association that many of them, the majority we fear, have not yet sent in their statistics for 1904, and this is May.

Do not let the spirit of modesty overwhelm you because you consider your own work small or insignificant. You are an integral part of the whole body of medical workers, and as such it is your duty to report on your work, so that the outside world, on whom we depend to a certain extent for encouragement and support, may know what we are doing, and your few hundreds or thousands of cases will add to the interest and honor of the work.

We would particularly urge the doctors in North and West China to send in their reports; so far only two hospitals north of Shantung and one west of Hankow have sent in their reports.

Mid-China and South China have sent in the most reports, so much for contiguity. It is quite necessary that the reports should all be in by June 10th, that they may be printed in the July issue of the JOURNAL. Please remember that fact and send them in at once.

Medical and Surgical Progress this month will be somewhat limited owing to the fact that some of the sub-editors must have fallen asleep, in spite of the editorial in the March number, which we will restate for the benefit of any who may have overlooked it.

The editors of departments in Medical and Surgical Progress are earnestly requested to send in their matter by the middle of the month previous to that in which the JOURNAL is published, that is, the matter should be sent to the editor by the 15th of February, April, June, August, October and December.

Dr. Whitney suggests in a recent letter to the editor that when we come across in a medical journal anything that would be of interest or help to physicians in China, we make excerpts and send it in to the JOURNAL, no matter what department it might come under, and that these might be grouped by themselves under some heading as Miscellaneous Notes or something of that sort.

I am sure the editor will welcome any expedient that will encourage a more general interest, especially in participation in the way of supplying interesting matter for the JOURNAL from those whom he once denoted as the "men behind the guns."

ERRATA.

Doctor Cousland calls our attention to two errors in the minutes of the Conference as published in the March number of the JOURNAL. The name of the Chairman, Dr. Neal, was omitted from the list of members of the Publication Committee; and Dr. Mary Niles, of Canton, was added to the same committee and not, as it would appear, to the Committee on Nomenclature.

Correspondence.

A meeting was held in London, February 6th, 1905, which is of special interest to our readers, as it convened to consider a proposal for a Christian medical school in China. It is an interesting coincidence that on the same date the China Medical Missionary Association was considering the same and allied subjects at its meeting in Shanghai. Dr. Maxwell, for many years a medical missionary in Formosa, presided. In the course of his address (reported in *Medical Missions at Home and Abroad*) he reviewed the past and present conditions under which medical work is carried on in China, pointing out how the changed feeling of the people towards foreigners enables the doctor to do his work in a much more scientific and satisfactory way than formerly. He also referred appreciatively to the work done by individual doctors in the training of students, and noted with approval the advance step made in establishing schools officered by medical missionaries belonging to different missions. Dr. Maxwell is of the opinion that if medical missionaries were to continue to have liberty to go forward and develop their own schemes they would be able to provide very creditable medical schools and turn out a large number of fully equipped men. But he believes that the Chinese government is likely very soon to take upon itself the charge of medical education, or if it fails to do so, that Japan will step in and take it up, and he considers it very unlikely that when such a time comes medical missionary schools

will be recognized by it. Hence his plea for the "Christian Medical School," a scheme outside the direct field of medical missions. We venture to point out that when government establishes its own medical schools it is very unlikely that it will enquire whether an existing school is supported by a general missionary society or a society or company formed for the one object of maintaining the medical school. The fact that it is Christian is all that is likely to be known, and if one remains unrecognized the other is likely to remain so too. Mr. Herbert Wenham was the next speaker, who explained briefly that the scheme was to establish a Christian medical school in Central China, consisting of medical school proper, a hospital in direct connection with it, and a college for resident students. Their aim was to make it the best school possible anywhere in China or the Far East, and hoped that it would attract pupils from the student and higher classes of the people and that it might be recognized as a proper Chinese medical school.

Dr. Gauld, formerly of Swatow, who proposed a resolution welcoming the proposal and appointing a provisional committee, pointed out that medical missions have not the training of students as their chief end and that students trained in the hospitals are usually Christian men, while in the proposed school the training of students would be its chief purpose, and the scheme would embrace all kinds of men from all classes and be a training school on a large scale.

Mr. Herbert Wenham is to come to China in the autumn to look

around him and see what the opportunities are and what the cost would likely be, and also to acquire the language of Central China. Nor is he the only one prepared to come. Mr. J. G. Gibb, a fellow-student at Bartholomew's, is looking forward to the same work when he has completed his studies, and possibly one or two others.

—
 ENG-CHUN, AMOY, CHINA, }
February 6th, 1905. }

DEAR DR. LINCOLN: Dr. Plummer asks a question in the last issue of the JOURNAL about operating on a man with elephantiasis of the scrotum, complicated with hernia. Having had some little experience in this matter, I purpose to try and answer the question.

It is stated by some of the authorities on the subject that the complication of hernia adds but little to the risk, and that the operation should be done at the same time as that of the removal of the scrotum. This is, in my opinion, only partially true. If the scrotum is a small one, and the hernia also a small one, there is no doubt that the advice is sound.

If on the other hand, the hernia is a large one, and the scrotum large, one is confronted by an operation, the difficulty and magnitude of which can only be realized by those who have met it.

In my last case, which unfortunately ended fatally, the scrotum was large, and the hernia was large, and though apparently reducible, turned out at the operation to be only partially so. The abdomen had evidently not held the major part of the hernia for a long time, and it was only by removing a large amount of omentum and punctur-

ing the bowel in several places to allow of the escape of gas that I finally got it reduced. I fear one of these puncture holes must have afterwards leaked, as the man apparently died of peritonitis.

If the hernia is really reducible, the main risk lies in the question of sepsis. If the wound can be kept aseptic the patient does well, but should be kept on his bed for at least three weeks to allow the abdominal wall time for consolidation. Usually the ring is very large in these cases.

My plan is first to operate on the hernia by a free incision in the line of the inguinal canal, and having sewn up the wound in the upper part to prolong the incision downwards and amputate the scrotum, shelling out the testicles and penis.

It is rarely possible to preserve a bridge of tissue between the hernia incision and the affected tissue of the scrotum. Dr. Plummer does not state either the age of the patient or the condition of his lungs. If the hernia is dependent on chronic cough and the lungs are much affected, operation is very risky, otherwise the age of the patient need hardly be taken into account.

Finally my advice is: Operate if the man has not got a chronic cough which is dependent on advanced lung trouble, keep him in bed for a week previously to try as far as possible to keep the hernia in the abdomen, have the bowels thoroughly emptied before operation, be prepared for a much larger hernia than appears on first sight, be prepared for a considerable amount of shock after the operation, and do both stages—the hernia and the scrotum—at one sitting.

With kind regards,

I am,

Yours very sincerely,

J. P. MAXWELL, M.B., F.R.C.S.

ICHANG,
December 15th, 1904. }

DEAR DOCTOR: We have to acknowledge a mistaken diagnosis. **A Mistaken Diagnosis.** The last article which appeared from our pen in the pages of the JOURNAL, July, 1904, page 123, reports in extenso a case of *mycosis fungoides*. We have just

received from an expert at home microscopic sections of the specimens we sent him, and these prove the case to be one of ordinary "*actinomycosis*."

We are,

Yours sincerely,

ANDREW GRAHAM.
GEO. F. STOOKE.

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Hospital Reports.

The work of the third year of the Hwai-yuen Hospital shows a marked advance over that of the year before. In the first place the foreign physician has been absent from duty for a much shorter time than was unavoidable during the previous year, and during his vacation the activities of the hospital, instead of very largely ceasing as formerly, have been kept up by the Chinese assistants, their increased experience giving them the necessary confidence and ability. Accordingly the dispensary has been open every week-day since the first of last October, except for a short time at the Chinese New Year, amounting in all to 272 days. During this period there have registered 1,334 new out-patients as compared with 572 for the previous year. Counting first and later visits we have treated 4,806 patients, while last year we only treated 1,803. A corresponding advance is evident in the number being 65, against 32 the year before.

There is less change in the character of the work than in the amount accomplished. We have labored under the same disadvantages of unsuitable and insufficient buildings as previously; many patients have had to lodge in neighboring inns, who we wished could enter the hospital to receive closer medical attention and the influence of daily instruction in Christian truth. Asepsis and ordinary cleanliness have been attained under difficulty and imperfectly. Proper supervision have been impossible, owing to the distance of the home of the physician in charge. But notwithstanding the difficulties we feel

that a good year's work has been accomplished, that will have its share in the opening of the region to the Gospel.

Two classes of cases stand out as most important from the medical standpoint—vesical calculus and entropion. One-third of our in-patients have been victims of the former disease, twenty-one operations having been performed, with one death. The misery of the victims is so intense, prolonged and hopeless, apart from treatment by foreign surgery, that they and their friends are invariably very grateful, and during their stay in hospital they listen attentively and respectfully to the story of God's love and mercy. As convalescence requires at least three weeks they are long enough in hospital to understand better what they hear than do many other patients. Both as missionaries and physicians we may take the greatest satisfaction in the opportunity we have of serving so many of these poor sufferers. Scarcely less noteworthy is the large number of patients with entropion or inturned eyelashes. The ophthalmia which causes it is the result of the promiscuous way the people of this part of China use each other's face towels. It sometimes seems as if half the population have suffered from this disease, and a very large proportion develop entropion with its harassing discomfort, often terminating in blindness. This year we have operated on over ninety such eyes, almost invariably with success. These patients also are very grateful.

We have further cause for encouragement in that we are beginning to hear of patients here and there through the country on whom the

truth heard in the hospital has made more than a passing impression. One man, twenty-five miles from here, has put away every sign of heathenism from his home; on Sunday he will allow none of his household to work, but instead invites his friends and neighbors to join them in the study of the Bible. While in the hospital he was the occasion of great anxiety on our part for two days on account of hemorrhage following the operation which was the means of his cure. Needless to say our anxiety is more than repaid. In the case of other patients who do not seem as earnest in inquiring about the truth of the Gospel, we have gained a friendly footing that would probably be possible in no other way. Last winter Mr. Morris and Mr. Sun were overtaken by nightfall at a place where they knew no one, and there being no inn they had great difficulty in finding a place to lodge. They were greatly relieved to be sought out by a former patient, who had been cured, by operation, of a painful and longstanding inflammation of his hand, who insisted on their coming to his house, where he entertained them most hospitably. This is only one instance of several that could be mentioned to show how friendly a feeling the hospital prepares, of which advantage may be taken by our itinerators as a starting point for preaching the Gospel.

During February the foreign physician made a trip to Feng-yang-fu with Mr. Morris; a small supply of medicines being taken in case there should be applications for treatment. We are astonished at the number who came; in three days we saw 129 different patients and hardly had time to eat or sleep. Mr. Morris feels that the visit marks a distinct advance in our work there, as it has given him an acquaintance in a number of homes

he could have entered in no other way.

One of the less satisfactory features of our work is the small number of women applying for treatment as in-patients; of sixty-five received into the wards only three were women. After three years in Hwai-yuen we have been called this spring for the first time to an obstetrical case. It is probable that unless we secure the help of a woman physician we shall do very little along this line for a long time to come. Still more immediate and pressing is the need of a man to take the place of the physician now in charge during his furlough, which is due in less than three years; and thereafter to help in developing the work in this large unoccupied region to the north and east of us.

Besides the patients already enumerated we have treated nine cases of opium poisoning in the hospital and eleven at their homes. Fifteen recovered, four died and one was dead on arrival. Apart from these we have made ten visits outside the hospital. There have been three deaths in our wards: one being from opium poisoning, one from typhoid fever, and one following an operation for vesical calculus.

SAMUEL COCHRAN.

THE OPIUM CURSE.

Previous experience had taught us that in an interior city like this, *Sui-ting-fu, Wan Hsien, via Ichang*, some time must elapse before we could win the confidence of the people to the point of filling our wards with medical and surgical cases. Not so, however, in the matter of opium-smoking, so we at once laid ourselves out for taking in and treating those who had become slaves of the terrible habit,

and who wanted to be delivered from its thralldom.

It was not long before our wards were full of such cases, and continued so till the autumn harvest time this year, when the number fell nearly to zero, only to gather up again when the pressure of harvest work was over. During this period our opium patients numbered over 120, men and women, young and old, some from the city, others from neighboring towns and villages, and some from towns distant as far as 120 miles; the time they stay is twenty days, and the money they pay a little more than covers the cost of their food. On entering they are clearly told what the regulations of the place are, and they sign a paper expressive of their readiness to comply therewith. Of course they cannot be allowed beyond the premises, and during the first few days we discourage as far as possible any visits from their friends, for that would certainly in many cases mean a surreptitious smuggling in of a little opium to lessen their sufferings, which at the same time would stultify all our efforts to effect a cure.

As to the curse of opium-smoking, I am perfectly sure that one day in an Opium Refuge would settle the matter in the mind of any unprejudiced observer; and no one who has visited such a scene, and come into actual contact with these men, could ever again maintain, as so many have done, the practical harmlessness of opium-smoking.

HOSPITAL WORK.

During this period we have also had several surgical cases, all of which have made very satisfactory recoveries and returned home thankful for restoration after years of suffering; but alas! those who submit to operation are but a small proportion of those we see in the consulting-room, and who are suffer-

ing from conditions easily remedied by a slight operation. The matter is explained to them; they are urged to come in, and apparently fully intend to do so, but we see no more of them, and we know that their friends at home have overpersuaded them. Thus there are scores of persons whom we have seen, and to whom a complete cure could practically be guaranteed, and yet they are going on unrelieved through the mistaken counsel of their friends.

This question is, of course, merely a matter of time, and perhaps the good impression caused by our anti-opium work is the very best method we could adopt to gradually break down prejudice, and in its place win the confidence of the people.

SCIENCE, THE HANDMAID OF CHRISTIANITY.

Now during the last twelve months I have made a special effort to make use of this changed attitude of the Chinese, by instituting a special department in our work here, calculated to bring us into actual touch and friendly relationship with the more educated portion of the community, to which, as to all other sections of society, we long to become messengers of Christ.

It is this special effort to which I would like now to refer in some little detail, and thus to gain the prayerful sympathy of those who have at heart China's highest interests. The means I have employed have been simple scientific lectures and demonstrations, mainly for the present confining myself to the two subjects of chemistry and electricity. With this object we have fitted up a small ward in the hospital as a temporary science room, till the growth of our medical work compels us to vacate this room, hoping that if by that time the

scheme has proved itself successful, we may be able to put up some special building for the science department.

It is just a year since I wrote home a circular letter to a number of personal friends and relatives giving some account of our work here, and directing special attention to an effort I had been led to make to come into more direct contact and friendly intercourse with the educated class through the medium of a science room and popular experimental demonstrations and lectures on science in its many practical applications to modern life.

In that letter I expressed the hope that we might be able to put up a suitable building where this work, already full of encouragement, might be more efficiently carried on.

The hope then expressed has been most abundantly realised, far beyond my expectation, and through the generous help supplied in response to that letter, we have now a most suitable building, admirably adapted to our requirements.

The three months have been to us a very busy and very interesting time in connection with this particular work, and my object in now writing is to enable those who have been sympathetically interested in this effort to know something of the use to which our new science room is being daily put.

During the last three months the city has been inundated by something like 6,000 students, who have gathered in this prefectural city from its seven subordinate cities, to present themselves for the literary examinations. As each day the students from only two cities present themselves for examination, it follows that every day there are a large number of students not undergoing examination. These students soon hear from one another of the science hall, and for many

weeks we had every day (Sundays excepted) crowded audiences morning and afternoon.

Our plan was to commence by assembling in the preaching hall, where we daily had sixty or seventy, or more, quietly and attentively listening, in most cases for the first time, to the Gospel, as my [native] medical assistant and myself would take it in turn to preach. This meeting usually lasted about an hour, and was followed by an opportunity for purchasing Christian books, Gospels, tracts, etc., whereby the Word of Life has reached hundreds of distant homes.

We would then propose adjourning to the science room, and soon that room would be packed. Repeatedly have we had 150 in the morning and a like number in the afternoon. Our largest number has been on several occasions 180 at one time, which meant every seat in the area of the hall occupied (120) and sixty standing in the gallery, which occupies three sides of the building.

These science lectures usually lasted an hour, and during the whole time perfect order and undivided attention characterised the audience. Many would stay after the conclusion of the lecture and ask questions evidencing real intelligence. Nor were these science lectures devoid of suitable opportunities for turning their thoughts from these laws of nature up to God, the source of all, and whose wisdom and power are so manifested in all creation. The subject of chemistry specially lent itself to such thoughts, as, for example, when doing experiments to illustrate the indestructibility of matter, or again when referring, in connection with oxygen and carbonic acid gas, of the wonderful inter-relationship between the animal and vegetable world.

Often, during this month of daily lectures, we were asked if we would

not have a progressive course when, the examinations being over, those who wished could attend daily, and finding that a month's interval would intervene between the two sets of examinations, I arranged to do so, put out notices to that effect, advertising a month's course of twenty-six daily lectures, comprising ten on chemistry, ten on electricity, and six on sundry subjects not previously specified. The lecture was to be of an hour's duration, commencing at 4 p.m., and the fee for the course to be three taels of silver, or about 7s. 6d. Twenty-two men, including two grown-up sons of our mandarin, entered their names, paid their fees, and received admission tickets,

They have really been an ideal set of students, very regular in their attendance, generally coming an hour before the lecture so as to have time to make sketches of apparatus, copy down diagrams, etc., and generally they would stay half an hour after the lecture, asking most intelligent questions.

It was interesting to glance over some of their note-books and see what clear diagrams they had made of apparatus and their lucid explanations of them.

This course of lectures were no sooner over than the higher grade examinations commenced, and again daily audiences, first in the preaching hall, and then in the

science room, have been the order of the day. Repeatedly have we had every seat occupied, and fifty or sixty standing in the gallery, yet perfect order the whole time.

Although the majority have come simply and solely to hear something of scientific matters, I very rarely saw any manifestation of impatience, but, on the other hand, marked attention during the time we were preaching prior to adjourning to the science room. We are on the eve of witnessing great changes in their whole educational system, and they all say that this is the last of this particular class of examination to be held here, as a new system of graduated schools is to be started next year.

Probably with this departure from their old time-honoured system of education there will be a steadily increasing desire to understand something of science in its principles and practical application, and thus we may, with every reason, anticipate a more and more extended use for our science room, and, through it, an increased intercourse with the educated class otherwise so difficult to reach, but to whom, as to all other classes of the people of this great land, we are meant to be messengers of God and heralds of salvation through our Lord Jesus Christ.

WM. WILSON.

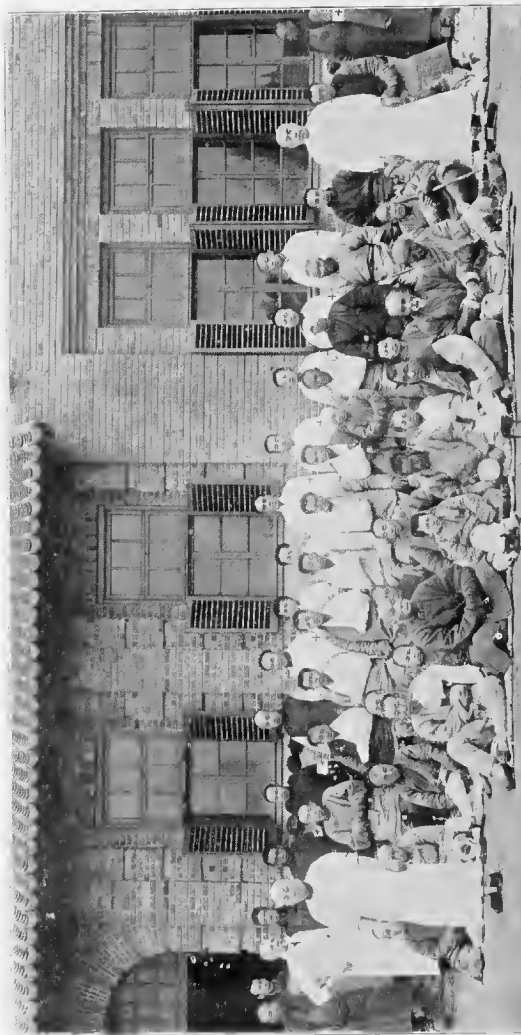
Personal Record.

BIRTHS.

- March 5th, 1905, at the F. C. M. S. Hospital, Nanking, to Dr. and Mrs. EDWIN A. LAYTON, a daughter (Mildred).
- March 13th, 1905, Wuchang, Hupeh, to Dr. and Mrs. ROBERT BORLAND, American Church Mission, a son (John Campbell).
- March 20th, 1905, Ku-lang-su, Amoy, to Rev. and Mrs. G. R. TURNER, M.B., CH.B., London Mission, a daughter.
- March 23rd, 1905, Heng-chow, Hunan, to Dr. and Mrs. E. C. PEAKE, London Mission, a son.
- April 12th, 1905, Shanghai, to Dr. and Mrs. A. G. HEARN, M.E.M.S., Huchow, a son.
-

DEATHS.

- At Baltimore, Maryland, U. S. A., March 12th, 1905, the wife of Dr. EDGERTON HART, of Wuhu.
- At Wuchang, Saturday evening, April 8th, 1905, HELEN ISABELLA, daughter of Dr. and Mrs. ROBERT BORLAND, of the American Church Mission, aged five years and eight months.
- At Liaoyang, Manchuria, April 23rd, ETHEL MARGARET COOMBS, wife of Dr. A. MACDONALD WESTWATER, United Free Church of Scotland Mission.
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DR. CHRISTIE, NATIVE ASSISTANTS, AND SOME CONValescent WOUNDED, IN THE MORDEN HOSPITAL.

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Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

DIPHTHERIA.

By J. R. WILKINSON, M.D., Soochow.

It is with some hesitation that I have selected the subject Diphtheria to bring before you at this time, hoping that I might provoke a full, free and candid discussion of the subject. The following synonyms only go to show how it is estimated by various writers: Putrid sore throat, malignant ulcerous sore throat, malignant quinsy, membranous angina. Again, note some of the definitions: acute specific, constitutional disease, both epidemic and contagious.

Beginning with an affection of the throat, characterized by a local exudation and glandular enlargement, the patient having fever, ranging very high; sometimes rather indicating the probable severity of the case. Often the nervous system suffers from the beginning, showing extreme prostration; the fever sometimes ranging so high that the patient is rather stupefied and indifferent as to what becomes of him, provided you will just not trouble him. Albuminuria is not at all uncommon in the most severe cases. As sequelæ various forms of paralysis often follow; a specific germ, the Klebs Loeffler bacillus, being present. The bacillus in its growth is supposed to produce a very toxic substance, a toxalbumen, the absorption of which produces the disease, and not the organism itself. Diphtheria is preëminently a disease of childhood. One attack does not immunize the patient. On the other hand, I think that a throat weakened by the first attack, if severe, would be more susceptible. Bad hygiene, low damp quarters, or cellars damp and mouldy are supposed to increase liability and severity. This, may it not be, is simply because the patient's constitutional resistance is so much lessened that the disease finds an easy prey. The principal cause, however, I

suggest, was contagion. Just what contagion implies I am not able to say. Some think that the room and house of a patient are so contaminated that even the atmosphere holds the deadly germ suspended ready to attack the unsuspecting child. This may be true, and yet I am rather inclined to think that some more tangible and direct method of communication is usually necessary. I have had some experience, though possibly not enough, to enable me to speak too generally. I believe that with presence of mind and care there is no very great danger of the physician carrying the germ about with him. Leaning against beds and clothing, with no cotton or linen overcoat for protection, sitting on benches and handling the patient's furniture after washing your hands, thinking you have finished, may make it very easy to carry the germ to the nostrils, mouth or eyes. Catarrhal conditions of the nose and throat furnish a soil peculiarly adapted to the propagation of the germ.

THE EFFECT UPON THE TISSUES.

The diphtheretic deposits differ from those of crupous or catarrhal troubles, in that they not only seem to be on the membranes affected but imbedded in them and difficult to remove. When removed there is generally bleeding of the raw surface, showing that they have a firm hold. Some authorities speak of the glazed appearance of the throat in the earlier stages. I cannot say that I have seen this so clearly. Possibly because the cases I have seen had passed that stage when I arrived. The redness and enlarged glands, the club-shaped uvula hanging in the upper end of a rather long, narrow opening, the tonsils presenting a rather white flat surface, give the throat its characteristic appearance. The general appearance therefore is different from that of ordinary tonsilar enlargements, which usually present rounded surfaces. Often you can see the edges of this membrane from the sides of the uvula as it hangs, having first formed on the posterior surface. I find it varies from small tenacious patches to more or less complete covering. The colour of this membrane, I believe, usually indicates the severity of the attack more than its extent.

I have learned to dread a thick, dingy, dressed-leather appearance, though the membrane is much more limited in its extent than it is when lighter colours are seen. If the larynx, trachea or nasal membranes become involved you have a harder fight. If the exudation is scraped off, it may return. If it separates of its own accord and then returns, it will probably be in very thin layers. The separation, I think, indicates a decline in severity. The muscular tissues of the heart, I

can well believe, become friable, soft, and easily torn, though I have not had the opportunity to make observations myself. Endocarditis is not an infrequent complication. The kidneys also undergo changes in severe cases, especially when the dreaded scarlatina insidiously and unexpectedly takes part in the struggle. The blood also undergoes changes, being of a black and fluid character.

SYMPTOMS.

Symptoms vary in severity. Incubation period from three to five days. The patient usually feels an undefined discomfort, feverishness, some headache, loss of appetite; finally throat and neck become uncomfortable, then chilliness, or possibly a chill, fear of cold, stiffness about the joints, symptoms growing gradually worse until the real fight begins about the time we are called, when we find a bounding pulse, coated tongue, more frequently some looseness of the bowels, but sometimes no action for several days, restlessness, deglutition painful.

EXAMINATION.

I try at all times to impress upon my students the fact that we are called to treat not so much a disease but a person who has a disease. Therefore not only should the patient be examined for the disease which he has been accused of having in his possession, but also a careful inquiry along with a careful general examination should be made that we may become acquainted as well as possible with the patient's family history and personal constitution. These facts will influence, to a certain extent, our care of the case, and probably enable us to better select drugs and size of doses.

TREATMENT.

I think that the bowels should be kept well open during the whole attack, but not to the extent that would be exhausting. The kidneys should be kept active, avoiding too much irritation; the physician being keenly on the watch for scarlatina. Basing my treatment on the theory that there is a poison (toxalbumen) produced by the action of the germ at the point of attack which, when absorbed by the tissues, causes the profound symptoms. (No one will contend for a moment that the sore throat alone is sufficient to produce the profound impression on the system.) I have great confidence in a careful and thorough daily clearing away of the mucous exudation with cotton mops saturated with *hydrogen peroxide*, regardless of the pain and discomfort complained of by the patient, thereby preventing the absorption of this poison. However I do not scrape off the membrane,

but as much as possible destroy it with full strength *hydrogen peroxide* solution, concluding each treatment with a thorough application of *spirits of turpentine*. After this daily application to out-door patients, I leave *hydrogen peroxide* with careful directions to have a certain amount put into the throat every hour and held there for a while and finally swallowed. In some cases where the crupous variety appears I have the *hydrogen peroxide* put through the nostrils and give *turpentine* freely internally, unless some imperative contra indications exist. In one case of the crupous form in a child two years old, apparently choking to death, I gave at once one dram of pure *spirits of turpentine*; half an hour the struggle for breath ceased, and the child was sleeping quietly. Final result: recovery. I have tried salt in dry powder freely applied to the surface, leaving it for the patient to eat, not knowing what he was eating. One little child recovered by this treatment. Its companion in the same family died the night I was called, suffering from the same disease, being moribund when I saw him. I have used *antitoxin*, and have been very much pleased with it; three thousand units being the largest dose used, and that on a boy fourteen years old. Two days after the dose a very heavy rash appeared. The temperature at the time of administration of the *antitoxin* was 106° Fahrenheit. The skin peeled off the whole body, especially noticeable in the palms of the hands and the soles of the feet, where it was undermined by fluid. He recovered after a long struggle for life. The third case in the same family to which I was called, gave me an opportunity to see this patient two weeks after I had discharged him. I found him suffering with a very marked general œdema, verifying my diagnosis of scarlatina as a complication with the diphtheria. I have found H. K. Mulford & Co.'s *antitoxin* quite reliable, and as they offer to replace any part of the stock which you have which has aged (if you will send back the old drug) there can be no loss caused by unused tubes. Paralysis following diphtheria is often very discouraging to the patient and distressing to his friends. In such cases it is hard for the physician to predict what will be the outcome. I have seen patients 12 or 14 years old drop about on the floor from paralysis after having been up for several weeks.

SOME REMARKS ON THE SURGICAL TREATMENT OF
URINARY CALCULUS.

By J. M. SWAN, M.D., Canton.

On a subject so largely written upon, and with the numerous methods proposed for the removal of urinary calculus (from the bladder), it may hardly seem necessary to add to what has already been written upon the subject. The object of this paper is not to review to any great extent the various methods employed for the removal of stone, but rather to emphasize the practical importance of certain details in operative procedure. The writer presumes to set forth some of these details after operating upon about fifteen hundred cases of urinary calculus during the past nineteen years.

Nearly all the various operations for stone have been tried. Most of them have their good points, but no given operation can be applied to all cases. The age and general condition of the patient, size and density of stone, and the condition of the urinary tract, should have an influence in the selection of the operation to be performed. We must also remember that among the Chinese, ignorance and neglect often produce physical conditions seldom found in the more enlightened races of the West, even in advanced stages of disease. The neglect these cases suffer from often modifies the operative treatment. After numerous trials of the various operations and a comparison of the results obtained, the following methods are usually employed in this hospital:—

From infancy to puberty the median perineal section has given decidedly the best results, unless the stone is exceptionally large, in which case the supra-pubic operation is resorted to. The complications referred to by some authorities, such as a lack of space, wounding of the bulb, and hemorrhage, have not been encountered to any extent. Generally in two or three minutes the operation is completed and the prolonged anesthesia necessary in litholapaxy is avoided. Recurrence in either children or adults is very rare after the perineal section, while we have found it comparatively frequent where the lithotrite is used. In children the introduction of the finger into the bladder can often be avoided, and in most cases the wound heals in from three to ten days.

In adults the lithotrite is used for small stones, but the delay of proper treatment gives a greater proportion of large stones than is usual in Western countries where earlier treatment is sought, and as a consequence suppurative cystitis often exists. The operation usually performed and which has yielded the best results, is lateral perineal

lithotomy. The writer has done sixty-five consecutive operations in one year without a death, and our records show that year after year this operation is followed by the lowest mortality. For several years litholapaxy was practiced in a large number of cases, but the results led to a return to the perineal section. Were our patients under the constant supervision and control of trained nurses, as such patients are in our home hospitals, the supra-pubic operation in adults would no doubt be more largely performed, though the condition of the bladder is often such that perineal drainage is desirable.

In regard to the lateral operation a few points in operative procedure may be of interest to those who are looking forward to work of this character:—

1. Avoid, as far as possible, the irritation caused by frequent soundings.
2. Examine urine for any indications of renal disease, and by preliminary treatment, put the patient into the best possible condition for operation.
3. With the bladder fairly distended with either urine or by the injection of six or eight ounces of water, just previous to operation detect as near as possible the size and character of stone.
4. After the incision and with the tip of forefinger in grove of staff or sound, introduce a grooved director into the bladder and immediately on removal of staff follow grooved director with either fore or little finger, plugging the wound so that bladder remains distended, then by manipulation (bi-manual if necessary) get a clear idea of shape and size of stone and as to the possible presence of more than one stone.
5. Select forceps as to size and curve which seem best adapted to the stone and with finger partly withdrawn, introduce forceps, and after grasping the stone follow again with the finger and manipulate the stone until it is grasped in the best possible manner to facilitate extraction.
6. A close inspection of the stone will show by its surface whether any fragment has been left or whether another stone is present or not.
7. After removal of stone and flushing bladder with a ten-grain boric acid solution at a temperature of about 104° F., with a full curved needle one or two deep sutures may be introduced into posterior part of the wound, coapting the sides as neatly as possible, thus facilitating the early closure of the incision. A metal canula is kept in place for about twenty-four hours to insure good drainage, and for several days the bladder is washed out with *boric acid* solution. Closure of the wound is generally completed in from five to fifteen days; the size of the incision and general condition of the patient having an influence on convalescence.

It may seem needless to mention these details to experienced operators, yet the success of the operation may depend on the observance of them. Too often our text-books fail to make clear the details of operative procedure, and, again, in isolated localities the medical missionary does not always have the aid necessary for operations, the success of which may largely affect his position and work.

This paper is necessarily brief, but if any of these hints prove of value to others, the writer will feel well repaid.

Discussion.

Dr. Boone has used the lateral lithotomy in boys, as he considers it safer and easier to do. He said the success of litholapaxy lay in the thoroughness of it. Use a fenestrated instrument and grind up the stone with powder, taking time to do it well. Then wash out until there is no fragments left. Practice on the bladder of animals until expert. In one case by another physician severe hemorrhage had followed, doubtless due to accidental injury of bladder wall. In preparation for operation reduce all inflammation and give a cathartic and enema.

Dr. Maxwell would not operate on a stone larger than two by one inches by the lateral method.

Dr. Watson usually followed the supra-pubic route.

Dr. Venable had found it often difficult to determine the size of stone, especially when in neck of bladder.

Dr. Wilkinson reported a case in which a rice straw ran through the stone.

Drs. Kember and Evans called attention to the fact that stone patients usually come from certain districts, and mentioned Dr. Cochran, of Hwai-yuen, who had had twenty-five successive cases in a short period of time.

Dr. Venable asked if abscesses in the left iliac fossal under the muscles were not intra-abdominal.

Dr. Boone considered them extra-abdominal.

Dr. Boone also advised full examination in all cases of stone. First, bimanual, per rectum; second, pass a lithotrite, grasp the stone in long and cross diameters and read off the exact size; then one can know just what it is best to do—crush, lateral lithotomy, or supra-pubic lithotomy.

CASES OF GANGRENE AND ABSCESS.

By W. E. PLUMMER, M.D., Wenchow.

GANGRENE OF THE FOOT.—The patient is a married woman aged twenty-seven years.

History.—For sixteen days before admission the foot has been swollen and very painful, and the patient has felt feverish.

On admission, 13th November, 1903, the right foot to above the ankle is swollen, the toes are black, while the dorsum of the foot is of a dusky red colour. A strip of skin on the inner side of the leg down to the heel is of normal appearance. On the front of the ankle there

are blebs. Over the diseased area there is loss of sensation and a feeling of numbness.

Subsequent Progress.—Temperature Chart A shows that from November 13th to 29th the temperature fell gradually to nearly normal. Temperature Chart B shows that from December 13th to January 9th the patient suffered severely from septic absorption. During this period the line of demarcation was widening and the dead tissue was becoming separated from the living. During the latter half of January the temperature was lower, but the pulse remained weak. In February the patient's general condition improved, and by this time the dead foot could be freely moved on the upper part of the limb, but was still held in position by ligaments.

Photo A, taken on February 14th, shows the appearance at this time. On this date the dead foot was removed by dividing the ligaments through the calcaneo-scapoid articulation.

The appearance of the limb, after removing the dead foot, is shown in *Photo B*, which was taken on February 27th. The soft tissues seen in this photo were living, but the lower end of the tibia and fibula were dead, so the patient was again advised, as at first, to have the lower part of the leg amputated.

On May 21st amputation was performed through the middle of the leg. The flaps were found to contain much subcutaneous fatty tissue which had undergone fibrous induration and was very poorly supplied with blood. This was thought to account for the fact that although the wound did not suppurate yet the flaps were very slow to unite. It was found after the operation that the tibia and fibula were dead almost as high as the granulating surface on the front of the leg.

Photo C shows the final result and also the splint with an artificial foot attached with which the patient was able to walk almost as gracefully as her foot-bound sisters.

LIVER ABSCESS.—The patient is a man aged thirty-two. Six months ago the patient felt hot and cold for a period of ten days, then he began to have frequent motions, accompanied by tenesmus. The motions contained mucous and blood. This continued for one and a half months, after which (i.e., four months before admission) the abdomen began to swell and to be painful. For more than a month before admission he has perspired profusely in his sleep and the appetite has been poor.

Condition on Admission.—P. 92; R. 23; T. 97.6. The patient is rather thin, the face is pale, the sclerotics are normal colour.



PHOTO A.



PHOTO B.



PHOTO C.

Circulatory System.—P. 92. The legs are slightly œdematous. The cardiac impulse is in the fifth space half an inch outside the nipple line. Cardiac dulness is limited above by the fourth rib, below by the seventh rib, outside by the nipple line. The cardiac sounds are normal.

Respiratory System.—The right side of the chest bulges outwards especially below the nipple; the intercostal spaces are filled out and the superficial veins are enlarged. Vocal fremitus is increased on the right side in front. There is increased dulness on the right side as indicated under the description of the liver. The breath sounds are normal.

Alimentary System.—The tongue is pale and flabby, but not coated; the appetite is poor. The abdomen is seen to be distended. By palpation and percussion the liver is found to be enlarged. The area of dulness is well shown in the photo which was taken June 17th. *Above* it extends to the fourth rib in the nipple line, to the seventh rib in the mid-axillary line, to the eighth rib in the sub scapular line. *Below*, in the nipple line, it is on a level with the umbilicus. In the mid sternal line it is an inch and a half higher, and towards the left side the dulness gradually ascends until it reaches the ninth costal cartilage.

Urinary System.—The urine is scanty, high coloured; there is no albumen.

Subsequent Progress.—On June 18th Manson's trocar and canula was inserted in the eighth intercostal space in the anterior axillary line. Over a gallon of pus came away. After the operation the writer was unable to attend the hospital for six weeks through illness. On his return he found that the assistants had allowed the drainage tube to come out shortly after the operation and had been unable to replace it. They said that the patient appeared quite comfortable and that on July 18th he went out feeling well. Towards the end of August he came to the hospital again in a worse condition than when he was first admitted. The liver was slightly more enlarged than before; there was œdema of the legs, hands and face, and the pulse was weak and the patient had become very thin.

The pus was again drawn off with Manson's trocar and canula. For three weeks after this tapping the patient improved, although complaining of the pain caused by the tube. Then the patient began to have a daily rise of temperature and night sweats, at the same time the discharge became offensive. An attempt was made to wash out the abscess cavity with weak *boracic* lotion. Hitherto the discharge had syphoned through a tube into a vessel containing *carbolic* lotion by the side of the bed; now this channel would become blocked, and was evidently not draining the abscess cavity properly. Inserting the

drainage tube gave the patient much pain, and as (at the operation the liver contracted after expelling the pus) the original opening into the abscess had moved upwards, it became necessary to insert the drainage tube in an upward direction in order to make it enter the cavity. As the abscess was not draining properly an inch and a half of the eighth rib was removed just above the existing opening. The entrance into the abscess cavity was enlarged with dressing forceps, allowing about half a pint of pus to escape, which the drainage tube had been unable to carry off. The drainage tube could now be inserted with ease, although still directed upwards. After the operation the fever and night sweats disappeared, the appetite improved and the drainage tube could be inserted without pain. Four weeks after the operation, when the writer was leaving Wenchow, the patient was steadily gaining strength.

NOTE: *January 29th, 1905.*—On my return to Wenchow in December (four weeks ago), I found this patient had become quite fat, but was still discharging two or three drachms of pus daily from the opening into the abscess cavity. Although pulse, temperature, appetite, and sleep were apparently normal, the patient preferred to remain in bed most of the day. About three weeks since the opening had again contracted, so that the insertion of even a small tube was painful, and the patient began to lose his appetite and sleep, but had no elevation of temperature. In consequence of these symptoms the old scar and a piece of rib were removed and the opening enlarged. This procedure relieved the pain and allowed a big tube to be inserted. At the time of writing the pulse and temperature are normal, the wound is healthy, the discharge, which is not more than one drachm or so per day, comes away easily. Yet the patient is not taking food as well as he did; he remains in bed all day and looks miserable, although not complaining of pain.

Remarks.—It is now six months since the patient first came under treatment. I hoped for his recovery long before this and am disappointed that he should progress so slowly.

March 20th, 1905.—Since the last note the patient has improved very considerably. The sinus has been healed for three weeks; there is no pain but a little discomfort when bending; the appetite is good and the patient sleeps well; he has also become very fat, as shown in Photo No. 2, taken on March 20th, 1905. As he has now been apparently normal for over a month, it is hoped that at last he is completely cured.



PHOTO NO. 1



PHOTO NO. 2

THE MISSIONARY SIDE OF OUR WORK.

By CECIL J. DAVENPORT, F.R.C.S., Shanghai.

This after all is the most important side of our work. We are found here to-day, not because of our science but because of our religion.

Hence it would ill befit us if we did not consider in this conference what is our most important calling, and try in it to mutually help and strengthen one another.

As no paper on this subject was forthcoming, Dr. Boone a few weeks ago asked me to prepare one in order to introduce it. I have done so in rather a distracted state of mind, having been precipitated suddenly into the hub of the world, and been much occupied by house moving and house furnishing, so I crave your indulgence and forgiveness if I deal with the subject somewhat partially and imperfectly, and trust you will fill up gaps and round off corners. To start with we must admit the fact that medical mission work is chiefly a seed-sowing, impression-making agency—a means of breaking down superstition, of opening up doors, a handmaid to the Gospel. From a humanitarian point of view the work we do is noble and glorious, an object lesson which speaks in no uncertain tone.

We need not be discouraged because one, two, five or ten alone join the church out of the hundreds of in-patients or thousands of out-patients. Most patients are with us for such a short period of time that it is no wonder that they do not join the church. We thank God for the few that do, but we can equally thank Him for the privilege of bringing His saving truth to the multitudes who do not. It is often the worst characters who come under our treatment. Hence we have a chance which is unique. The reaping may be far off; the necessary sowing has been committed to our hands, and in the doing of this duty faithfully, lovingly, constantly, lies our success.

How, then, can we as medical missionaries conduct our hospital work so as to do the best missionary work?

I. First and foremost it appears to me we have to create a Christian atmosphere for our patients to live in. That means that we ourselves, our evangelists, assistants, nurses, coolies, cooks, gatekeepers, should ever be a witness of that love and mercy which gave itself for us. The beams of love and light shining into the dark and hardened souls who come into our wards must make an impression.

Here is our grandest opportunity and of course our hardest task!

Be our work ever so fine its results will only be temporal unless the touch of the spiritual is with it and works through it. We all know the difficulties and temptations which so easily beset us—the climate, the language, ill health, the character of the people, the rage for statistics, the multitudinous duties, the desire to get a tip-top work and reputation, etc., etc. How all these come in as flaws and defects and detract from our spiritual force !

Then, too, with our assistants ! We can't do without them, and yet after years of training, just when the work has grown, and we can rely on them, we may find they are pilfering drugs or getting fast and singing theatrical songs and so on.

It is very hard and most trying, and often makes one feel inclined to give up in despair. What is one to do under such circumstances ? It surely is a balancing between the forces for and against the Christian influence of the hospital, and has to be decided accordingly. I believe often a godly coolie or gatekeeper does as much good in our institutions as a fluent preacher. We should ever have in view this object—it may take months or years to attain it—viz., the creation of a "Christian atmosphere" in which our soul-diseased patients may breathe and bask, thereby receiving the working of light and life in their souls.

II. The second and next most important work is seed-sowing. For this the appointment of a godly hospital evangelist, or preacher, is most essential.

The more able and successful we are in our profession, the less time we have for evangelistic work, but the more we draw patients into the sound of the Gospel. Danger may be ahead here, but I believe we best glorify God by using the gifts He has given us, and for which we have made special preparation, leaving others to work in their special line upon the results of those gifts.

Each one will have to act just here as he feels it his duty before God.

The evangelist preaches and teaches, sells books and tracts, talks with the patients and explains the truth ; and alternating with missionary or doctor, conducts morning and evening prayers in the wards or chapel. He also takes a kindly interest in the patients, finds out their circumstances, etc.

By these means a large amount of Gospel teaching can be brought to bear upon those who come for a few weeks under the influence of the work.

If we have Christian assistants and helpers all these should partake, so that the solidarity of the "force" may be felt as well as the Christian character of the worker strengthened.

Let me here emphatically protest against the position of a medical missionary who, through want of the language, or other reasons, is debarred from the joy and privilege of proclaiming the Gospel of salvation.

There are many other seed-sowing methods—a text on a prescription paper, or calendar or a special sheet tract given out, etc. In our visits to private houses, or when we see paying patients out of dispensary hours, etc., we can have a little talk and leave a written message. These and such like means, helped by the united prayers of the workers as they daily begin their work, are wide-reaching in their results, and “who can tell whether this shall prosper or that”?

I should like here to emphasise the desirability of church and hospital being in close touch and proximity. Our patients should see our church and its work, and feel its influence, and carry home a good idea of its nature and use.

III. The next opportunity we may mention of doing missionary work is by holding individual intercourse with our patients. One drops a word here and there going round the wards, or we may sit by their bedside and have a talk on things eternal.

The rush of work does not enable one to do much of this.

Or we may gather them together on a week day or Sunday into a class. By this means we get into closer and more direct touch with them.

We all do something in this line, yet I fear we somewhat neglect our opportunities here, where I believe it is most important to clench the result of our teaching in many cases.

IV. The last method I will mention is the following up of those cases who have lived long in the wards, or those who have shown interest in the Gospel.

The mission evangelist, or hospital evangelist, should make this his work. As a further help, printed forms, such as were suggested from this hospital (St. Luke's) in a late number of the JOURNAL, should be to hand, so that they may be filled up and sent to the missionary in charge of the district to which the patient returns.

Thus, by a little tending, and watering and caring the seedling may grow till the full fruition is attained.

What more can be done? Paul may plant and Apollos water, but it is only the Lord who gives the increase. So that we must and ought continually to bring unto Him in prayer the needs and prospects of our work, seeking the power of His own Spirit to use and bless all these our human agencies.

Discussion.

Dr. Woodhull emphasised the importance of creating a Christian atmosphere in the hospital by seeking the spiritual welfare of all hospital assistants. "Spend time with them."

Dr. Goddard—Is it wise to compel patients to attend services?

Dr. Fitch spoke of the value of the work of lady doctors amongst the tea girls in Soochow, and also in connection with the slave girls.

Dr. Maxwell enquired as to the best means of following up patients. Asking pastors to look them up and write news of their condition did not prove very successful.

Dr. Lyon—I believe in encouraging patients to learn to read by the promise of a small reward, such as a picture card. We teach them in romanised. We send Bible-women to the homes of patients and notify the nearest pastor. We conduct morning prayers with our patients. The Bible-woman spends the morning in talking to the patients in the ward. In the afternoon we have a service in a room on the verandah. All patients who can walk attend, and repeat the verses they have learned in the wards. Rewards are given to those who do well. Some women can repeat the whole hymn book. Every Thursday evening we have a prayer meeting. On Sunday afternoon classes conducted by the students are held. We believe in a patients' Sunday school.

Dr. Woodhull spoke of holding a Bible class with her medical students; the wives of teachers in the medical college also attended.

Dr. Boone introduced Archdeacon Thompson as chaplain of St. Luke's Hospital. The latter emphasised the importance of maintaining a Christian atmosphere by getting into spiritual touch with all the hospital assistants. It is our custom at St. Luke's to hold a service in the chapel every morning. Services are also held in each ward. Singing hymns is much appreciated. The distribution of suitable tracts and literature is very valuable. We employ a Cantonese assistant to work amongst the Cantonese patients.

Dr. Neal assembled all patients who could walk for prayers each morning. It was his practice to treat them medically after the service. Their attendance was not compulsory.



REFUGEES IN MOUKDEN AT FOOD.

AFTER THE BATTLE (MOUKDEN, APRIL, 1905).

By DUGALD CHRISTIE, F.R.C.P., L.R.C.S.

All has gone on quietly here since the Japanese took possession of the city. The great battle of Moukden, however, will not soon be forgotten. We first heard of the Japanese forward movement on February 25th, and we felt pretty confident that this advance would end in their triumphant march into Moukden. Day after day the battle raged ceaselessly, the firing of heavy artillery steadily increasing, first to the south-west and south-east and then along the whole front, a distance of about ninety miles. On the 7th of March the sound of the large guns came much nearer, reverberating through the city and shaking our windows, and on that evening, and for several nights following, the sight from the balcony of our house was glorious. About three miles to the south of us the great Russian stores of fuel and grain were in flames. Bridges and villages were also burning, and the whole sky was ablaze. High up in the air the shrapnel shells were bursting, and the roar of artillery was incessant. On the morning of the 9th the pom-poms and rifle firing seemed quite near. That night a rearguard action was going on a little to the S. E. of us, and before daylight on the 10th the fighting was within half a mile of our house. Bullets were seen falling in our garden, and a shell fell in a gully quite near, but fortunately did not explode.

The wounded began to arrive early that morning, and we soon forgot the sound of battle. A number of wounded Chinese were lying outside the wall, and bearers with stretchers were sent to carry them in. By 9 a.m. the operating-room presented a lively scene, and we were kept going very hard all that day. In the afternoon a sharp fight took place quite near us between the Japanese and several hundred Russians who were trying to escape from the city. The bullets fell thick round the hospital, and we could hear them strike the roof and chimneys. At this time some retreating Russian soldiers seem to have lost all control, and entered Chinese houses, shooting any one they met. They got into one of the refuges and deliberately killed several of the defenceless inmates.

Nine wounded Russians were under our care for some days till removed by the Japanese. Their admirable medical arrangements, and the kind, gentle way in which they handed the Russian wounded showed how well they treat those who fall into their hands.

We also had twenty sick and wounded Japanese in the hospital for some time. The military authorities took very kind notice of what we did for them, and Marshal Oyama presented me with one thousand yen for our hospital work.

I enclose a photograph of some of our convalescent wounded. The more serious cases could not come outside. The assistants and myself are in our white operating garments. In the centre of the front row is an old man of about eighty, showing the remains of his right thigh which had to be amputated on account of a severe wound. The little boy behind him and to the right had most of both hands blown off while playing with a hand grenade which he found in their compound. Of the seven whose arms are put up in slings six were wounded by tampering with unexploded shells or hand grenades. In four of these cases the hand had to be amputated. The boy standing in the centre with his head bound up had a narrow escape. On the afternoon of the 10th March several Russian soldiers, who had failed to escape, entered his home, where at the time were two men and five boys. They all managed to escape but this little fellow, who was last. He fell in the doorway, and one of the soldiers made a rush at him. A sweep of the sword fortunately missed his neck which was aimed at, but cut off part of the top of his head. The sword point was then thrust into his back, wounding his left lung, and he was left for dead. I am glad to say he has made a good recovery.

I also send a photograph of a group of refugees at food in front of one of our refuges. We have had about 10,000 under our care for some months, besides over 20,000 looked after by the native officials, but many, I am glad to say, are now able to return to their homes, or what is left of them.

NEED OF A COMMITTEE ON MEDICAL PUBLICATIONS IN CHINESE.*

By PHILIP B. COUSLAND, M.B., C.M.

Among the most important subjects that fall to be considered at this meeting of the Association are : (*a*) the provision of suitable up-to-date text-books and (*b*) the publication of a medical journal in Chinese, for the benefit of our assistants, students and ex-students whose medical training has been in their own language.

Looking over a catalogue of medical works in Chinese it would seem to be a fairly long and complete one. In *materia medica* there are several works ; there are many chemistries from a complete translation of Bloxam down to simple primers ; two or three works each on the theory and practice of medicine, anatomy, physiology, surgery, obstetrics, eye and skin, and one each of symptomatology, syphilis, general therapeutics, pathology, diseases of children, nursing in abdominal surgery, fevers, dictionary of treatment, and treatment of wounds.

As I said this list makes a fair showing, but a little investigation reveals the absence of a consistent system of nomenclature, and also that some of the works are hopelessly out of date, and some are so badly translated or arranged as to be almost unreadable. With few exceptions there seems to have been little attempt on the part of authors or publishing societies to keep their works up to date, each new edition being simply a reprint of the first.

Of works using the new nomenclature we have Dr. Whitney's new translation of Gray's *Anatomy*, now being published ; a translation of the last edition of Kirke's (now called Hallihurton's) *Physiology* ; Dr. Ingram's translation of Hare's *Therapeutics*, which is ready for the press ; and Dr. Neal's text-books on *Diseases of the Eye and Skin*, which will soon be revised in accordance with these terms. Dr. Mary Niles has in hand a translation of a standard text-book on *Obstetrics*, and a translation of Osler's *Principles and Practice of Medicine* is also on the stocks. I should mention too that Dr. Gillison has a work on *Inorganic Chemistry* nearly ready for the press.

Our urgent needs are :—Revised or new works in *materia medica*, surgery, gynecology, physical diagnosis, pathology and bacteriology. Of these I believe Dr. Neal may undertake the revision of Dr. Hunter's *Materia Medica*. What is to be done about the others? Who is willing to give us a new surgery, gynecology, and pathology, and to undertake

*Read at the Medical Conference, February, 1905.

a clinical manual and a bacteriology? Or shall we ask the Canton Medical Missionary Society to change the terminology of their surgery and gynecology so that they will be in line with the other books?

With regard to the publication of a medical journal in Chinese I need hardly say anything. We are surely a unit in earnestly desiring it. Who has not commiserated his or her helpers, past and present, in their ignorance of all that is happening in the medical world?

It remains then for this meeting to consider what is the best plan to adopt to obtain a good series of medical text-books in easy Wên-li, all using the Association's terminology, and to publish a Chinese medical journal.

The most feasible plan would seem to be the formation of a Translation or Publication Committee, who would see what books were lacking or required revising or reprinting, find translators or editors, or consider proposals made by members who wished to undertake the translation of particular works. If possible let the Association own or control all the new books, so that they shall form a consistent series.

I shall not occupy your time by discussing what is the best plan to adopt; whether we should ask some mission to set apart a man for a term of years to act as general editor in some such way as men are lent to the S. D. K., whether we should raise the necessary funds and have a publishing society of our own, or whether we should ask the Educational Association to do this for us. These problems had best be left to a committee to thresh out and report, so I conclude by moving that a committee be appointed to consider the whole question of the provision of medical text-books and a medical journal in Chinese and report to this meeting of the Association.



Medical and Surgical Progress.

Medical Progress.

The Editor.

THERAPEUTICAL SUGGESTIONS AS TO SCARLET FEVER, WITH SPECIAL REFERENCE TO THE HEART AND OTHER COMPLICATIONS.

Fischer, in the *New York Medical Journal* of December 17th, 1904, says, first and foremost, put every scarlet fever patient in bed and keep him there at least four weeks. The temperature of the room should be between 68° and 70°. Ventilate frequently. It is safer to protect the body with sweet oil, *lanolin*, or *carbolized vaselin*.

Second, the temperature is no guide as to the time when a child should be permitted to leave the bed.

Third, the heart and the pulse should be the true determining guide as to the progress and the condition of the patient.

Fourth, the diet should be liquid, and should consist principally of milk and alkaline waters.

Fifth, stimulate the emunctories, as we know that we can eliminate toxins through the kidneys, bowels, and skin.

Sixth, a hot saline colon flushing, one or two quarts, at a temperature of 115° to 120° F., should be given once a day after the first week, regardless of its necessity. It will stimulate diuresis, also cleanse the bowel and nourish the blood.

The following drugs are preferred by the author during scarlet fever: Antipyretics, none; avoid them, owing to their depressing the heart's action. *Sulphocarbolate of sodium*, 5 to 20 grains, three or four times a day; for the kidneys

hot salines and diuretics liberally; for the heart sparteine, strophanthus, and 5 to 20 drops of a 1-to-5000 solution of *adrenalin*. This last named drug has a very stimulating effect on the heart's action; besides, it does not irritate the gastric mucosa, nor has it a cumulative effect. If the pulse is watched we can frequently reduce a rapid pulserate and steady the heart's action by the use of *adrenalin*. Hot baths, especially the hot-air baths, seem to weaken the heart's action. It is a good plan to assist those organs in which complications are expected long before the actual complication has set in, and thus try to avoid the latter.—*The Therapeutic Gazette*.

SCARLET FEVER AND SOME OF ITS THERAPEUTIC POSSIBILITIES.

Seibert states in the *New York Medical Journal* of December 17th, 1904, that the important findings of Jochmann prove that the scarlatinal organism lodges in the throat, in some lymph nodes, and in the skin of the patient for days, even in severe cases, before it enters the blood to kill the patient. In fact, the life danger in this disease appears to rest in the possibility of streptococci entering the blood in large numbers from the invaded throat and skin.

If this is true, can we destroy streptococci in the scarlatinal throat and skin before they can enter the blood? This, the author believes, we can do.

During the last ten years he has used inunctions with 5 per cent

and 10 per cent *ichthyol lanolin ointment* twice or four times daily into the entire skin in every case of scarlet fever. Swelling and itching were thereby diminished, and later on the almost entire absence of desquamation, even in severe cases, proved that the inflammation of the skin had been actually reduced. The ointment must be rubbed well into the skin.

Ill effects from such inunctions have never been noticed by any one in New York. A Dr. Kraus, of Prague, Bohemia, who reported adversely on three cases of scarlet fever in which he used *ichthyol ointment* (*Prager Med. Wochenschrift*, Dec. 27, 1900), did not use *lanolin* but *vaselin* as a vehicle, and therefore his observations have no value.

Furthermore, these inunctions aid in preventing contagion, for in numerous cases treated in families with three to seven children living in small flats, no further cases developed after the first one had been treated in this manner. That *ichthyol* is a germicide for streptococci has been shown in a series of experiments in the Hygienic Institute at Greifswald by Abel in 1893. So far only streptococci have been found in the scales and the blood of scarlatinal patients.

The most dreaded complication of scarlet fever is streptococcic pharyngitis. After trying bland solutions for irrigating the nasopharynx, injections of *chlorine water*, and also *ichthyol solutions*, without decided effect, the author began about four years ago to disinfect the nasopharynx and pharynx with a 50-per-cent resorcin-alcohol solution as soon as exudate began to show itself in the throat.

The patient is placed upright on the lap of the nurse as when intubation is performed, the wrists are held down, and the head is held firmly by a second attendant stand-

ing behind. A plug of absorbent cotton, wound around a curved applicator and dipped into this solution, is quickly introduced over the handle of a tablespoon into the nasopharynx on one side of the uvula, left there a few seconds, and then withdrawn. A second application is made on the other side. No swabbing or wiping away of exudate is resorted to, for on the introduction of the cotton the soft palate instantly contracts and so presses the fluid into every nook and corner of the throat. The solution penetrates through the exudate and deep into the affected mucosa, and there destroys the life of every streptococcus (or any other germ) it comes in contact with.

That all of the visible surface of the throat has been flooded by this solution can be seen by a milky appearance of the surfaces. Where this is wanting, a third and fourth application should be made instantly.

These applications should be made once daily in early and mild cases of scarlatinal sore throat, twice daily in more advanced cases, and every two to four hours in far advanced cases, where they can then yet save the patient in some instances.

This energetic treatment is absolutely harmless to the patient, for it can be employed in infants as well as in adults. As a rule, a reduction of the swelling of the adjoining lymph nodes is noticeable within a few hours after the first application. The treatment must be continued until the throat is free from exudate and the lymph-nodular swelling has disappeared.

Wherever the presence of true diphtheria is even suspected, the author of course uses serum at the very beginning of each case.

In the most dangerous cases of scarlatinal sore throat the Loeffler bacilli are not present, and for want

of an effective streptococcus serum this local destruction of pathogenic organisms at the very source of supply has given the author, and others who have tried it, considerable satisfaction.—*The Therapeutic Gazette*.

TUBERCULOSIS, SUGAR IN.

A method which has given results far beyond expectation is the over-feeding of patients with sugar. Ordinary sugar is not only a promoter of heat, but also a dynamogenous food which is well adapted to the requirements of the cachectic consumptive. The authors recommend large doses, from 100 to 500 grams of sugar daily; in other words, from 5 to 12 grams of sugar per kilo of body weight. The patients gain weight rapidly, in some cases faster than the actual weight of the sugar ingested would warrant. They never suffer from fermentation or other gastric complications. Sugar gives the best results in the febrile cases. It may be diluted with milk or disguised with coffee or bitter tinctures. Sugar diet is well borne by those tuberculous patients who are otherwise difficult to feed, and even by those who cannot take *cod liver oil*. R. Massalongo and G. Danio (*Riforma Medica*, December 21, 1904).

TYPHOID AND COLON BACILLI IN WATER, THE EFFICIENCY OF COPPER FOIL IN DESTROYING.

From experiments thus far conducted, the author draws the following conclusions: The intestinal bacteria, like colon and typhoid, are completely destroyed by placing clean copper foil in the water containing them. The effects of colloidal copper and copper sulphate in the purification of drinking water are in a quantitative sense much like those of filtration, only the

organisms are completely destroyed. Pending the introduction of the copper treatment of water on a large scale, the householder may avail himself of a method for the purification of drinking water by the use of strips of copper foil about $3\frac{1}{2}$ inches square to stand over night, or from six to eight hours, at the ordinary temperature, and then the water drawn off or the copper foil removed. Henry Kraemer (*American Medicine*, February 18, 1905).

TYPHOID FEVER, TREATMENT OF.

In the treatment of no disease, unless perhaps it is pneumonia, is there such a variety as in that of typhoid fever—and yet at the same time in none is there greater monotony. Almost every physician who is called upon to see many cases of this disease, after trying various methods and testing one new or popular theory after another, gradually settles down into a more or less unvarying routine—not always to the advantage of his patients. But with most of us there is still an uneasy feeling that perhaps we are not doing the best we can for those who place their lives in our keeping, and for this reason perhaps there is nothing more interesting than to learn how others are doing and what success they are having.

Dr. F. Foord Caiger, who was the Bradshaw lecturer for 1904, took for his theme the treatment of typhoid fever, or enteric fever, as it is usually called in England. In his introductory remarks he referred to the fact that the case mortality of typhoid fever in England remains at a height of more than 15 per cent. The treatment of typhoid fever is necessarily conducted on one or two lines, viz., an active remedial method or a passive or so-called expectant method, each of which has its firm

adherents. The three methods of treating enteric fever by means of remedies which are assumed to be capable of exerting a direct controlling influence over the natural course of the disease may be designated as the specific, the antipyretic, and the antiseptic, according to the nature of the agents employed.

The hope that the serum treatment of typhoid fever would prove as valuable as in the case of diphtheria has not been fulfilled. However, in this connection it should be mentioned that Chantemesse claims to have produced a serum, the nature of which is not known, the use of which in enteric fever is said to have met with remarkable success. Wright's method has also had some considerable degree of success.

An antipyretic effect may be produced either by drugs or by the direct application of cold to the body surface by baths, packs, sponging, etc., or by a combination of both. *Quinine* is undoubtedly the best drug for this purpose. It possesses a marked antiseptic influence over living cultures of the typhoid bacillus, and its administration is not attended with cardiac depression. For the purpose of lowering the temperature, *quinine* must be given in large doses—15 to 20 grains or more—twice in the twenty-four hours. Or a still better method is to give it in four $7\frac{1}{2}$ grain doses, repeated at intervals of fifteen minutes in the evening of every third day during the first fortnight of the fever. In cases of moderate fever, the writer does not favor the use of antipyretic drugs, at least in antipyretic doses. He believes such pyrexia to be a natural element of defense against bacterial invasion. In cases of excessive pyrexia, however, vigorous antipyretic measures are indicated. The cold bath is the most effective method of applying cold to the surface. Its contraindications are well

known. It is probable that the cold bath owes its superiority over all other therapeutic measures of which the chief aim is refrigeration to its salutary influence on the nutrition of the skin and kidneys. The "graduated bath" has been widely recommended.

Although it is now recognized that any attempt to destroy the bacilli in the lower intestinal canal by the administration of antiseptic drugs by the mouth is futile, unless given in such doses or in such strength as greatly to injure the patient, still it is not unreasonable to expect that they might be capable of exerting some restricting influence on the multiplication of bacteria in the mucous membrane and contents of the bowel. This is positive in respect to the various putrefactive organisms, for there is a decided decrease in the fetor of the stools after the use of antiseptics. The writer calls attention to the good effects, in suitable cases, of *calomel* before there is much diarrhoea. But in certain cases, even when it is given not later than the end of the first week, it causes intestinal irritation which is prejudicial to the patient. The writer has been so impressed with the fact that he has given up the routine use of *calomel* in the early stage of typhoid fever, and limits himself to its use in cases in which there exists some special indication for this drug. *Perchloride of mercury* has been highly recommended as an intestinal antiseptic. Although Dr. Caiger believes that some of the antiseptic remedies distinctly influence in a favorable manner the course of an attack of typhoid fever, still he does not believe that they are capable of cutting short the attack or of lessening to any appreciable degree the risk of hæmorrhage, perforation, or relapse, as some have contended. He mentions some other antiseptic re-

medies, among which are *sulphurous acid*, *oil of turpentine*, the combination of *quinine* and nascent *chlorine*, and the essential *oil of cinnamon*. His results so far with the *oil of cinnamon* have been favorable. Among 147 cases, there was a mortality of 9.5 per cent. The temperature ran lower in these cases than the average in typhoid cases, the patients for the most part remained drowsy throughout their illness, thus enjoying mental rest, and delirium was less frequent. Intestinal decomposition was controlled in a striking manner, no single instance of metcorism occurring among the 147 cases in which this remedy was used. It is well, the author says, to begin with small doses, for example, $2\frac{1}{2}$ minims, increasing this to 4 or 5 minims in the course of a few days. Laboratory experiments with this oil have been likewise encouraging. In cases in which there is any suspicion of circulatory failure, he gives a grain of *sulphate of quinine* with each dose.

Dr. Caiger believes that the adoption of an entirely expectant treatment is not only fallacious in its conception, but very mischievous in practice. In the absence of a specific, he would treat a case of typhoid fever on symptomatic lines, and, in addition, would employ from the earliest possible date either antipyretic or antiseptic remedies, or both, as might appear especially suited to the attack and to the individual in question. In the treatment of toxæmia it is always well as a preliminary measure to rid the lower bowel of its putrid and offensive contents. *Calomel* is most effective for this purpose. Soap and water enemata, with the addition of turpentine, are also useful, as is the *oil of cinnamon*. The cinnamon treatment is also especially serviceable in cases with nervous manifestations. It is most important for the victim of typhoid fever

to obtain mental rest. For this purpose opium is valuable. In ataxic cases, a combination of *quinine* and *chlorine* is excellent. In the treatment of pyrexia, Dr. Caiger much prefers the cold pack to the cold bath. If the effect of this treatment proves temporary, the pack should be repeated and *sulphate of quinine*, 15 to 20 grains, combined with 15 to 20 minims of *laudanum*, should be given. The administration of *quinine* usually prolongs the effect of mechanical refrigeration. In cases in which restlessness and insomnia do not yield to cold sponging, one of the numerous hypnotic drugs may be tried. If diarrhœa and abdominal pain are present, the preparations of opium are especially useful. If the number of stools exceeds more than four or five in the course of twenty-four hours, the diarrhœa should be controlled. If the feeding is not at fault, a starch and opium enema is indicated. Cold abdominal compresses are of value when definite tenderness exists. Constipation is well treated by a soap and water enema, not exceeding a pint, in the morning of every third day. In cases of cardiac failure, *strychnine*, *quinine*, or *digitalis* may be given. There are special indications for the employment of alcohol, but the lecturer thought that in most cases of enteric fever, alcohol is not only not required, but its employment is occasionally distinctly harmful. In cases of intestinal hæmorrhage, he said, that after having seen that the patient receives a full dose of opium and that an icebag is carefully applied to the abdomen, the treatment may be summed up in the simple word "precaution." The complete deprivation of fluids, except an occasional fragment of ice, is most important in these cases. As to the management of perforation, the lecturer was in complete

accord with those who hold that a moribund condition of the patient should be the only contraindication to operation in such cases. And as to the most favorable time for operation, "there is no time like the present." A careful examination of the abdomen should be made daily in the course of typhoid fever, as then any change in its condition will be more accurately perceived. Editorial (*Medical Record*, January 28, 1905).

TYPHOID FEVER, WATER-DRINKING IN.

Large quantities of water internally, a gallon or more in twenty-four hours, may easily be taken by

typhoid fever patients, if administered in small quantities at frequent and definite intervals. A copious elimination of watery urine at once follows, the degree of polyuria, day by day, closely corresponding to the quantity of fluid ingested. Patients are more comfortable by this mode of treatment and toxic, nervous symptoms are lessened. The mortality, as well as the severity, of typhoid fever, seems to be still further diminished by this method of hydrotherapy employed as an accessory to the cool-bath treatment of the disease. E. F. Cushing and T. W. Clarke (*American Journal of the Medical Sciences*, February, 1905).

Pathology and Bacteriology.

Under the charge of JAMES D. MAXWELL, M.D.

THE PATHOLOGY OF LEPROSY.

There are few subjects of more general interest to practitioners in the East than that of leprosy; and the majority of the cases at least of the severe varieties are so hopeless that any addition to our knowledge of the subject is most welcome. We therefore call the attention of our readers to an article by Captain E. R. Rost, I. M. S. (*British Medical Journal*, February 11th, 1905). Captain Rost claims to have successfully solved the problem of how to cultivate the hitherto unculturable bacillus and thereby to have obtained a toxin-leprolin, the injection of which into leprosy subjects produces a marked general reaction and a rapid improvement in the leprosy area.

Captain Rost states that it is the presence of the salts of chlorine in the nutrient media which inhibits the growth of the bacillus lepræ. To obviate this objection he tried distilling beef extract, and thereby obtained a fluid smelling strongly of beef and containing only the

volatile substances in beef; in this medium both the bacillus lepræ and the bacillus tuberculosis grew with the greatest ease.

This method was further improved by passing superheated steam over the beef extract soaked in pumice-stone in bottles inside the autoclave. In this medium one can obtain a growth of the bacillus tuberculosis in from one to three days, and the bacillus lepræ in from three to five days. The characteristic appearance is a curly, white, stringy, heavy deposit at the bottom of the tubes.

By dialyzing nutrient agar in frequently changed warm distilled water a nutrient agar was obtained entirely free from sodium chloride, and on the surface of this the bacillus grew with the greatest ease; at first as a white and later as a yellow or brick red, curly thick surface growth.

The bacillus of leprosy, when stained, may be differentially diagnosed from other acid fast bacteria as follows:—

1. It retains the stain of acid dyes much more than any of the other bacteria of this class.

2. It is more irregular than the tubercle bacillus, and not curved, and is somewhat smaller.

3. It contains small oval spores within itself, which are highly refractile, and the end of the bacillus may be open where some have presumably escaped.

4. It has a beady appearance due to the presence of these oval spores.

5. Like the *B. tuberculosis* it may grow out in cultures into long branching filaments, but there are often oval spores separate in the cultures, and these may be alone visible at times.

6. In the body it is found in great numbers inside epithelial cells, generally in the middle of the cell, whereas the *B. tuberculosis* is found in small numbers inside giant cells at the polar ends.

Pasteur flask cultivations become cloudy after from one to two weeks. Usually after six weeks the culture is ready to be made into leprolin.

Manufacture of Leprolin.—This toxin is prepared on similar lines to the preparation of tuberculin. The bacillus is grown for six weeks in Pasteur flasks, the cultures filtered through sterile Pasteur candles, and then reduced to one-tenth of the original bulk, and finally filtered through re-sterilized Pasteur filters.

Action of Leprolin.—A case of leprosy, after the first injection of leprolin, will get a severe reaction, which may come on very soon after the injection, the temperature running up to 104° F. or higher, the anæsthetic areas becoming red, hot, and swollen, and the pulse and respiration rate going up very soon after injection. The fever may come down a little on the second day, but usually rises again to 102° to 103°, and then gradually falls to normal on the third or fourth day, the redness and swelling gradually subsiding, and with this subsidence the sensation may return in some of the anæsthetic areas to a large or small extent according to the case.

There is a good deal of smarting at first at the site of injection.

The dose is 10 ccm. injected into the muscles of arms or buttock.

The most remarkable effect of leprolin on lepers is the suddenness with which the sensation returns in the anæsthetic patches. The next thing the leprolin does in alleviating the symptoms of this disease is: It relieves the shooting pains in the limbs and the joints and causes the heavy sensation in the limbs to disappear. It changes slowly the white anæsthetic patches by commencing in the centre and edges of the patch to change the colour of the skin to normal.

The same leprolin and the same preparation of the same culture of the bacillus will not always produce the same effect in all cases of leprosy. In some it may cause a slight reaction, in some it may cause a very severe reaction. As a rule, the severity of the reaction may be taken as an index of the benefit that is likely to occur, and this in itself is a good sign of the beneficial action of this material in this disease.

I have been injecting only once a fortnight, but in some bad cases I have injected at intervals of only a few days.

I have now injected this material over 400 times, and in no case has there been a bad symptom, while in every case the disease has ceased to advance. The action of leprolin, then, appears to be very similar to that of tuberculin when the latter is applied in cases of lupus. As is well known, however, the action of tuberculin is dangerous, as it is liable to loosen the bacilli from the deeper tissues and cause a general infection of the disease. There appears to be no such danger with regard to the action of leprolin. Tuberculosis is a disease which affects the hypoblastic tissues, while leprosy is a disease which affects the epiblastic tissues.

Surgical Progress.

Under the charge of J. PRESTON MAXWELL, M.B., B.S., F.R.C.S.

THE SURGICAL TREATMENT OF PRURITUS ANI.

There is no class of affections which may give a surgeon trouble like the class mentioned above. Most surgeons have met with cases which failed to yield to any treatment. And so any new treatment is welcome if it seems to afford any prospect of cure. *Ball advises the following operation: A curved incision is made on each side of the affected area and carried down to the sphincter muscle. A small neck of uncut tissue is left behind in front of the anus. These flaps are raised by careful dissection from the surface of the muscle round its anal margin and then up the anal canal to above the muco cutaneous junction. The pedicles in front and behind are now undercut, and the outer concave edges of the incision are also undercut to a depth of half an inch. Bleeding is carefully stopped, the flaps readjusted and a few points of suture inserted, leaving plenty of interval between them for drainage.

The rationale of the operation lies in the division of the nerves leading to the skin of the affected area, which becomes anæsthetic, and the itching is relieved.

ON THE USE OF INJECTION ANÆSTHESIA.

From time to time fresh advances have been made in this important subject, and there is no doubt that for some kinds of operative work, such as tumours or cysts of the thyroid gland (malignant disease excepted), it is far superior to any method of general anæsthesia. But the technique requires care, and

it is in this connection that a paper by Barker in the *British Medical Journal* of December 24th, 1904, is important. The writer has kept any note on this paper back till the present moment in order that he might himself verify the plan there given. And the result has been a complete success. It is impossible to quote the whole paper, but it will suffice to give the salient points.

(1) The aim of the surgeon is to hit off with his injection the nerve trunk, the terminal filaments of which supply the area of operation.

(2). Adrenalin is combined with the anæsthetic to render the part more or less anæmic. This prevents the rapid removal of the anæsthetic agent by the blood vessels and lymphatics, and so prolongs the anæsthesia, and as the anæsthetic thus enters the circulation in minute doses there is the less fear of damage or irritation of the nerve centres.

(3). Cocaine is given up entirely for B. eucaïne, of which as much as 6 grains may be used at a single injection. No ill effects have been observed, while after cocaine ill effects are not rare. And any one who has once had a bad cocaine poisoning case never wants another.

(4). The solution Barker advises is the following:—

Distilled water, 100 cc or 3½ oz.

B. eucaïne, 0.2 gram or 3 grains.

Sodium chloride, 0.8 gram or 12 grains.

1 pro mille Adrenalin chloride solution. mX.

Any syringe may be used. Barker describes a very convenient one. The writer has used a serum syringe with platinum iridium needles, and finds that it works well. Practically every sort of operation may be done under this method, but it is well to remember that local anæsthetics are of little value in tissues which are the seat of acute inflammation, though it is possible that by this method of reaching the nerve trunks at a distance from the part it may prove to be useful in these cases also.

* *British Medical Journal*. Jan. 21st, 1905.

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Editorial.

It is certainly an inspiration as well as a pleasure to go over a thoroughly established, well organized work of any kind ; add to that the fact that it is medical work and situated where it is most needed in one of the great centres of this great country, and those feelings become intensified. Early in May it was the editor's privilege to make a short visit to Hangchow, and of course the attraction for him, outside that of nature, was the C. M. S. hospital and allied works. I use this qualifying phrase advisedly, for one who has never been there and has only heard of "Dr. Main's hospital," can have but a faint conception of what a wonderful work it is doing.

Situated in the heart of the busy city, and hemmed in on all sides by houses, it is impossible to realize its extent until one attempts to go about it.

One enters from the front through a well-supplied drug store, where those who can afford to pay for their medicines can get them in proper form, and where certain luxuries or necessities, such as condensed milk and cod liver oil can be obtained at cost prices. Behind that are the hospital buildings for men and women, with the lecture room for medical students, well-equipped operating room, and the wards for men, women, and children. At one side of the main entrance is a place of preliminary detention for doubtful or contagious cases. In another quarter, segregated, are the venereal patients ; in another compound close at hand, and under lock and key, is the opium refuge ; near by another place, where a few of the lepers are cared for. Adjoining are two schools: one for the children of the hospital assistants, and another for the children of the lepers who are not themselves leprous.

Repair shops of various kinds for such a little city. The stables, and the residence of the doctor.

Out by the beautiful West Lake, some five miles away, is a leper home for men, a tuberculosis house, and a convalescent home, and down in the concession outside the city is a dispensary which is in charge of one of Dr. Main's efficient native graduates, of whom he has a very useful corps to assist. With Dr. Main is associated Dr. Arthur Kember, who has been in the work some ten years. The place seems to be excellently managed, but even with their efficient staff it does seem a bit too much for two men to carry. But then, most medical work is so undermanned out here that we are inclined to look upon two physicians at one station as a crowd and three as a host. The doctor has been in China nearly a quarter of a century, and naturally has worked up from the day of small beginnings to his present interesting and useful establishment.

The average capacity of the hospital is about 150, which can be increased to nearly 200 if necessary. In capacity, unless I am mistaken, it is second only to the Canton hospital among the strictly Christian hospitals in China.

The great virtue of the Hangchow hospital is not so much in the kind, though with increased facilities that does improve, but in the amount of good work it is able to accomplish.

It is an inspiration, as it shows what time, experience, and love of humanity can bring forth.

Would that there were more like it.

THE ROLLS.

The editor is trying to make out a revised list of the members of the Medical Missionary Association, which has not been published since 1897. Owing to the end of the term and stress of other work he will not try to publish it before the September issue of the JOURNAL.

One would think it a comparatively simple matter to compile such a list, but if he has ever had any experience in catalogue making of any sort he will realize that such is far from the fact. Of

the old list of 129 names apparently only seventy are now in China. Since that date 130 new members have been elected to the Association, of whom three have died and some others have left the field ; on the other hand, some of the old members, as well as those admitted since 1897, have apparently lapsed if the mailing list of the JOURNAL can be taken as an index of their interest in the Association.

It is true that where there are two or more physicians at one station one copy of the JOURNAL may be sufficient for their perusal. But even if you are beyond the need of the JOURNAL, the latter still needs your aid, financial and otherwise. Then there is the publication fund which touches you very closely if you are teaching in Chinese. The subscription by the way has passed the \$1,000 mark, and so far only forty-two members of the Association have given to this important object. If we do not back this ourselves, how can we expect our friends to do so?

And how the editor needs more interest from the members! It is said that small drops of water will in time wear away the hardest rocks, but it will take something more in the nature of drops of *nitro glycerine* to wear away the petrous layer of indifference and inertia and reach the heart of true sympathetic interest for all that affects our work, which the editor well knows lies in the breast of every one who has come to China in the right spirit, even though the cares of this world have crushed its zeal for anything beyond the duties that lie nearest it.

MEDICAL NOMENCLATURE.

Attention is drawn to the publication of the Second Edition of the list of Terms in *Anatomy*, *Histology*, and *Physiology*. This has been carefully revised and amplified, and the terms may be considered as standard ones. See notice in advertisement columns.

A pamphlet including the nomenclature of *Materia Medica*, *Pharmacology*, *Pharmacy*, and *Bacteriology* is passing through the press and may now be ordered.

CHINESE MEDICAL TRANSLATIONS.

It is of the utmost importance that all who are engaged in translating medical works into Chinese, or who are contemplating doing so, should at once communicate with Dr. J. B. Neal, Chinan-fu, Shantung, so that there may be no waste of effort in two workers translating the same book.

PUBLICATION FUND.

Previously reported ...	...	...	...	...	...	\$807.00
Dr. Dugald Christie ...	...	...	...	...	...	30 00
Dr. P. S. Cousland (Hongkong, \$29.00) ...	...	...	...	...	...	28.07
A. B. Ross, Esq. (Tls. 40) ...	...	...	...	...	...	54.64
C. Z. Bong, Nanzing ...	...	...	...	...	...	20.00
Dr. J. M. Holordt ...	...	...	...	...	...	5.00
W. W. Ritchie, Esq....	...	...	...	...	...	25.00
Miss Boehne ...	...	...	...	...	...	5.00
Miss Walter, Bloomsburg, Pa. ...	...	...	...	...	...	104.70
Dr. E. I. Osgood ...	...	...	...	...	...	10.00
Dr. W. H. Venable ...	...	...	...	...	...	10.00
						<hr/>
						\$1,099.41

Hospital Reports.

As compared with former years the hospital has established a *Soochow Hospital* record this year on no less than six counts :—

1. Number of out-patients.
2. Number of paid calls to private families.
3. Total number of patients of all kinds.
4. Donations.
5. Total receipts.
6. Number of graduates from the medical school.

The increase in out-patients is largely due to increased attention to this department ; the presence of two physicians for a greater part of the year making it possible for one of us to be present nearly every day.

The work is divided as follows :—
Dr. Park acts as consultant to the in-patients and X-Ray department, has charge of the out-door department, and answers most of the out-calls to private families. Dr. Fearn has charge of the in-patients, does most of the surgical operations, attends to the Customs service and answers some of the out-calls, and runs the X-Ray in the afternoon. Brother Lucas has the X-Ray department in the morning, directs the pharmaceutical work and drills the medical and university students in the afternoon, in addition to his duties as hospital chaplain, and we all take turns at teaching the medical students according to the hours appointed in the schedule.

Dr. Dzung, the house surgeon, and the assistants all do their parts so well, too, it is a great pleasure to work with them, and the amount of suffering relieved some days in extracting aching teeth, taking out

dead and decaying bones, opening throbbing boils and abscesses, dressing wounds, ulcers and carbuncles, stopping blinding processes in eyes, thus saving and restoring sight, is enough to repay one for the incessant demands on one's strength and time.

DONATIONS.

We started the year by giving. In the first place we gave the Board a self-supporting hospital. It had been almost self-supporting for years, but until this year always received a little help from the Board. Then Dr. Hearn asked us to lend him a sedan chair for use in his medical work in Huchow, and as the hospital had several on hand, we gave him one. Then when our Presiding Elder said he thought the evangelical and medical work should be more closely united and asked for a house rent free for our pastor, we granted him his request and gave him the use of our assistant's house without charge for a year. Then we paid the bill of \$171.15 still due for the Sungkong dispensary for drugs and supplies for last year. Brother Reed asked for help for a new building for medical work in Sungkong, and we gave him \$200.00 toward that branch of our work. Then the native physician there asked for money for a pocket case of instruments, and we bought a nice one and presented it to the dispensary. Then the bill for medicines and supplies for last year in Sungkong was sent in, \$156.00, and we paid that. And in addition, during the whole year we gave medicine and attention free to every poor patient, unable to pay,

and while we charged for board and medicines in the hospital, yet we have never refused admittance to a patient because he had no money.

And what have we received! We have received all we gave and more too, pressed down, shaken together and running over, enough for all our running expenses for the year, for all our drugs and supplies, to put \$100.00 repairs on the assistant's house, to rebuild the fallen down servants' quarters at the hospital house costing \$550.00, to repair the hospital itself to the extent of \$620.00, to set aside \$5,000.00 for a second physician's house and \$2,000.00 for the chaplain's house and still have over \$600.00 on the right side of the balance sheet. The X-Ray machine run by Mr. Lucas and Dr. Fearn and the operations done by Dr. Fearn have been large factors in getting up these donations. It was after looking at his own bones and seeing the heart of the Japanese Consul with the X-Ray that Governor En Shou agreed to donate and raise the \$3,000.00 wanted to build Dr. Fearn's new house.

Another circumstance worthy of record is that several of the wealthy men of Soochow when approached by the doctor for subscriptions thanked him for allowing them the privilege of giving.

OUT-CALLS.

These make up the most trying and unsatisfactory part of our work. We are never called to an easy case, at least not to a case easy in the eyes of the Chinese. They generally wait till half a dozen or more Chinese doctors have given up the case and then send for the foreign doctor. Often enough the sick one is beyond recovery and, if there is any delay in getting started, a second messenger may

arrive telling the doctor not to come, as the patient is already dead. Occasionally, though, it happens that what was impossible to the Chinese doctor is plain sailing for the foreigner, and great are the exclamations and bowings and talk of *genii*, etc., etc. Such cases make reputation, and bring in the calls, in spite of the numerous failures, and so it happens that our practice increases from year to year.

Once this spring the doctor was called out in the dead of night to see a man who had been injured in a fight in an opium den. On reaching the patient's home he was directed to the house of the man who had done the injury, and he found the wounded man and his friends all duly installed, the latter eating and drinking and smoking opium at the expense of the other fellow, and showing bloody clothes and having the patient groan in order to impress the other man with the awfulness of the injury he had inflicted, and when the doctor, after dressing the wound got ready to leave, the man who did the injury had to pay the bill, and the friends insisted that the doctor should come as often as he liked and charge as much as he pleased and use the best medicines in the world; price no consideration, since all was to be paid for by the other fellow.

The other fellow then had the doctor to feel his pulse and examine his wounds, in order to present a counter bill, but as he could show only bruises and no blood he lost his case.

At another time the doctor was called to the boat landing to see a man at the point of death from strangulated hernia. As he reached the boat, the beaming face of the man's wife appeared at the door and she called out, "We have met the sure enough member of the genus *genii* this time; you

need not come aboard; no sooner did my husband hear your footsteps approaching than the tumor popped in of its own accord, and he felt himself easy and well."

MEDICAL STUDENTS.

Two young ladies and six young men who had taken the regular course, received their certificates at our commencement in June, and one who failed to pass some time ago, passed his final examination this year, making nine graduates in all. Governor En Shou, flanked by his entire staff, the highest mandarins in the city, presented the diplomas in his usual happy style, and stirring addresses were given by Rev. Drs. Gilbert Reid and Y. J. Allen. Dr. Allen took full advantage of the occasion to appeal to these high mandarins for Christianity, Christian education and Christian liberty for the country, and so far from being offended the Governor spoke highly of the address and of Dr. Allen's energy, and said no Chinese under such circumstances would dare to speak out so bravely.

W. H. PARK, M.D.

I well remember the day when Dr. Polk, half in jest and half in earnest, suggested that *Woman's Hospital, Soochow*, for one year I act as her substitute in the Soochow woman's hospital. I remember how she showed me the hospital report with the record of a single ward patient and a yearly record of less than a thousand clinic patients. I recall my remark that I thought I might be able to manage that one ward patient without experiencing too great a strain on my constitution. (I might add in passing that later on that same patient "managed" me.)

Then when kind fate willed that the half jest should become whole earnest, I came, and saw, and was frightened, but in time I came to love the work with a love which seemed to make it a part of my life.

The following statistics will give a fair estimate of the year's work:—

Clinic patients	...	...	6,851
Ward patients	...	...	203
Itinerating	...	...	1,067
Stray patients	...	...	754
Out-calls	...	...	205

Total 9,080

The financial statement shows a balance of \$1,179.83 in hand and \$500.00 on fixed deposit.

The item most worthy of report, as I see it, is the work of Dr. Zak Foh-me. This report, by right of one who bears the weight and brunt of the work, of one who has grown up with it and served it faithfully and well, should have been written by her. She seems to have inherited all the good qualities of her former teachers, while the undesirable traits have failed to make an impression upon her strong and independent character. I would that the time were mine to tell of all her work. She not only gives the gentle, patient, heart service of a Christian physician, but to this virtue she adds that of being a modern Dorcas. I told her a short time ago that my only reason for wishing to outlive her was that I might see the curious collection of garments brought for display by the crowds whom she had served who would come to mourn. She is truly a splendid woman, and I count myself fortunate in that for eleven years she has been my pupil, friend—and in lessons of patient endurance—my teacher.

Mrs. Mo has for so long been identified with the hospital that she has become bone of its bone and sinew of its sinew. She is the

most invaluable worker and one peculiarly fitted by nature and training for the work she has to do, though it must be confessed that she labors under the impression that the virtue of prayer and exhortation lies in length.

The three little apprentices deserve a word of commendation. Their willing feet and hands have saved us many a step and their sunshiny faces are helpful to doctors as well as to patients. While as yet they are lacking in age, cerebral grey and ballast, time will certainly improve the first and last, and the cerebral grey already gives evidence of undergoing a thickening process under the stimulus of instruction as applied at our little missionary society day school. Their morning hours are given up to work in the hospital and their afternoons to their studies.

Misses Sung and Nyi, after five years of conscientious work, graduated in June from the Soochow medical college. The occasion was one of great interest and *éclat* when forty-two officials occupied the platform and H. E. the governor presented the members of the class with their diplomas.

Among the patients we find them who vary in their habits of drug taking from those of the cast iron stomach order, who take a week's supply of *strychine* or *arsenic* at one dose and return for more, to those who receive a radical cure from the presence of a bottle on an adjacent table. In no other work do we see the best and worst sides of human nature, or the brightest as we see it here. Just here I am reminded of the little girl, the only child of a farmer, who was brought to us with the calf of her leg split wide open from knee to ankle—a little buffalo tender—who was stepped on by one of her charges and whose gapping bleeding wound was stuffed tightly with manure

filled earth and straw. At first she was afraid of us, then she loved us, and when that terrible disease—lock-jaw—first began to manifest itself she clung to us, and later on when we knew that the end was near our hearts ached with grief as we watched her efforts to tell us through tightly locked jaws that we were kinder even than the "Goddess of Mercy;" and then when the end came her last words and thoughts were for those who had shown her loving service which can only come when Christ has filled the heart.

The medical school was closed in June, and will not be reopened until the Chinese New Year, at which time we hope to reopen with a larger class than we have ever had, and one in every way better prepared for the work before them.

To Drs. Park and Fearn I make my best bow, and along with this expression of appreciation of past favors, I will add that I look forward to future work with them with genuine pleasure.

A retrospective glance then over these eleven years reveals changes many and marvelous. An increase of confidence in our Western methods, and entrance gained into the homes of the highest, a turning to us for aid, and that little indefinable something which foretells greater changes and a dawning of better days which must come with a better people.

These changes express much and mean more to a people who have inherited pride of birth, of literary standing, of peculiar faith in the traditions and beliefs of their forefathers—and what could be at greater variance with their ideas of ancestral worship and respect than the acceptance of the foreigner as a friend, teacher and physician? They have much to contend with, not only in their present environments but in their inherited

tendencies of hundreds of centuries! How much greater then should be our forbearance because of these unseen but potent and ever present influences.

For all that the year has been full of joy, and the work pleasure, we welcome Dr. Polk home again with a great rejoicing, for to her belongs the credit and the praise for the success of this work.

ANNE WALTER FERN, M.D.

The Tooker Memorial sends us a very readable little report of the *Tooker Hospital*, good work going on in a very *Soochow*, populous section of Soochow. It is the same story with which we who work in Chiua have become so familiar, and of which the world at home knows so little.

The overwhelming sense of the work to be done and the struggle to do it as it should be done in the face of constant demands for more service. Disappointments and triumphs under all sorts of conditions.

The report is mostly filled with interesting little sketches of individual patients, and designed more to awaken interest of those in the home lands than of the busy doctors on the field, and yet those of us who see it are moved by the thrill of fellow feeling, and we can read between the lines and know what that report stands for in the lives of the two loyal women who are giving their lives to it.

136 in-patients.

4,999 dispensary patients.

315 treated on itinerating trip.

90 out-cases.

This is but a fractional part of all the work involved in the above figures.

We gladly appropriate from the *North-China Daily News* an account of the opening of the new hospital

in Yang-chow, Dr. P. S. Evans in charge, as follows:—

YANGCHOW, 1st May.

The opening of a dispensary, as the beginning of the Yangchow *A New Hospital*. Baptist Hospital, was quite an impressive occasion, as it brought together practically all the high officials of the city and a large majority of the foreign missionaries and native Christians.

Medical work was begun in the dispensary on the 5th of December, 1904, and since that time over 450 different patients have come, making over 1,200 visits. The work has not been pushed as it might have been, because of the lack of money to pay for trained helpers, etc. And for the same reason few serious operations could be attempted.

When the buildings were begun in March, 1904, it was hoped that they would be all finished in the early autumn. But as a fact they are not entirely done yet. Those who have built in interior places know of the slowness of the work. Still we could not delay the opening indefinitely, so decided upon Friday, the 7th of April, which turned out to be a splendid day, and as convenient as could be expected, when so many were concerned.

Formal invitations were sent out to each of the sixteen higher officials of the city, and cards of invitation to all the native Christians were sent to each of the churches. And of course all the missionaries were invited "ex officio." All of the officials replied, and on the day appointed eleven of them came, including Chang Tajên, the prefect.

The service was put at three in the afternoon. The officials, however, were asked to come at two so as to have time for the proper ceremony in receiving them and showing them around the buildings.

The hospital grounds occupy the northern part of the large compound set apart for medical work, situated within the city, close to the south gate, yet outside the crowded quarter. The hospital gate is on a main street. On entering, the waiting room, or chapel, 25 by 35 ft., is immediately on the left, and the gate-house and cook-houses on the right. Back of the waiting room, and separated by a covered passage, is the main dispensary building, 72 by 20 ft., divided into four main rooms, and a small dark room for eye and throat work. The rooms from east to west are used as office and guest-room, drug room, general consulting and operating room, and women's room. It has been a surprise to find that over one-quarter of the patients were women, before there was a woman connected with the work. There is now a trained Chinese nurse to assist in examining the women.

The west room was cleared out and decorated with plants and flowers in half-foreign style, and the officials were received there and given tea in foreign fashion with light refreshments. After the first formalities were gone through, the officials were taken through the rooms in detachments, and evinced great interest in the apparatus, especially the microscope, in which a fly's wing had been arranged for them to see.

As soon as the Prefect had arrived and been shown around, all were invited into the chapel, which was already crowded with over 175 people. The officials had come so late that the service had to be shortened. Dr. Evans offered prayer and called on the Rev. L. W. Pierce, who has been in Yangchow about thirteen years. He spoke of the great change in the feelings of the people since he first came. At that time no one seemed to want them to come, and now

they were distinctly friendly. He said the people were to consider the dispensary as theirs, for it was built to help them.

The Prefect responded, asking the Yang Wu Tong Tze to tell them that now the Chinese and foreigners would live as one; that they were glad the dispensary had come, for all knew that the missionaries came to help the Chinese to do good, and were doing good themselves.

The congregation being made up largely of Christians, the singing was especially good, and must have been a new experience for the officials. The Rev. P. S. Evans, the father of the doctor, spoke briefly on the source of the money used for the dispensary and of the motive of the friends in America who had given it. Dr. Evans then said a few words as to the main purpose of the dispensary—to proclaim and illustrate the Gospel. He also outlined the plans for the hospital buildings which, it is hoped, can be erected in a year or two.

After another song, the service was closed with the benediction by the Rev. Mr. Pierce, after which all were invited to look over the dispensary, and tea and light refreshments were served.

The third year of the school's existence has now come to a close, and it is due to our many friends to tell them how we have been getting on. It is not an easy thing to draw up a report of the year's work, but looking back over it so many interesting features present themselves that the task becomes, if not easy, at all events pleasant. Further, the retrospect deepens the feeling of which we have been conscious throughout the months of the year that our way has been

*London Mission
Medical School,
Hankow.*

directed by higher than human guidance. There have been not a few tokens in the way of difficulties removed and special help bestowed that God's blessing has been resting on the work.

Coming then to the record of the year, friends may remember that at the close of 1903 we had thirteen students who went in for their professional examinations. Of these nine passed successfully; one who failed, is still with us, taking out classes and hoping to succeed later. Two others left of their own accord, and the fourth, whose conduct was exemplary but whose brain power was obviously defective, was advised to leave. A position was found for him in a hospital near, where he now is giving great satisfaction to the doctor in charge by his reliable and careful work.

When the new session began in March, 1904, that is, after the Chinese New Year, eleven or twelve young fellows turned up, applying to enter the school. This is a larger number than had ever applied before and is an indication of what is the general attitude of the Chinese now towards Western knowledge.

Out of those who came in the spring we chose eight, whose Chinese and general knowledge seemed to promise well, and these were drafted into the first year's class. The majority of them paid their own fees, not receiving any foreign help: this is a larger proportion than in any previous year. Seven out of the eight were either themselves Christians or the sons of Christian parents, and the other one, after being with us some months and daily hearing about the truth, has since applied for admission in the church. The first question to be solved was that of accommodation. We had only one class-room for lectures, and the

three sleeping rooms were full already. The only course seemed to be to absorb some more of the hospital, when by the kindness of those in charge of the theological college, a new dormitory in that building was put at our disposal. Thus by encroachment on the hospital on the one hand, and this timely help on the other, we got two classrooms and all the sleeping accommodation required. It is unnecessary to point out that both in the hospital and theological college we are but tenants-at-will, liable to be turned out when either institution requires the space it is now lending to us, and greatly desiring the day when we shall have a proper building of our own.

The work was arranged as follows: the third year men studied by themselves, having lectures on *materia medica*, pathology, and surgery, with some instruction in clinical surgery. They also did practical work with the out-patients two days in the week. The first and second year men worked together, devoting their time to anatomy (arm, leg, and chest) and chemistry. The text-books used were well-known English books, the gist of which we translated orally to the students who took down their notes in Chinese. Here as in the past the terminology has been a great difficulty; fortunately the Medical Missionary Association of China has been publishing from time to time lists of some of the terms that we commonly use. These, though incomplete, have been of very great service, and we in our turn have been able to send down some suggestions which that body has now adopted. The spring session passed quickly by; class examinations were held at intervals, and we soon realized that our eight new men were on the whole possessed of as good brain power as the men of any preceding

year. Their conduct was very good, while in diligence they exceeded healthy limits; it being no easy matter to see that they got some exercise by day and the proper amount of sleep at night. Towards the close of the first half year we had to dismiss one third-year man, whose conduct had, for some time, been unsatisfactory. During the second half of the year we were disappointed by the resignation of another very promising senior, who found the work too hard for him. With these two exceptions all the others have remained with us and given us much satisfaction, so that we closed the year with sixteen students. About the middle of January the professional examinations were held. This year we had the kind help of Drs. Aird, Fowler, Somerville and Thomson, who devoted no little time to setting the papers and assisting in the oral examinations. Our best thanks are heartily accorded to these gentlemen for their interest and sympathy. The papers set were on the model of what is usually asked in English examinations. The result was as follows: out of twelve juniors who competed, ten passed in anatomy and nine in chemistry; while of three seniors all passed in *materia medica* and two in pathology. Such a result is a matter for great thanksgiving, and we all, teachers and students alike, feel that had it not been for divine help, the result would have been very different. In translating and explaining the subjects we have been greatly helped, and our students have had many of their prayers answered as they sought to understand and remember technical points that English students find it hard enough to take in and retain.

Having thus completed another year of work we are able to take a bird's eye view of the course our students are going through, and

we see that the theoretical part cannot satisfactorily be got into four years. So we propose to make the fifth year also a year of lectures and clinical work, while the sixth year will be entirely practical. Then again the limited accommodation at our disposal, and the fact that our furloughs are imminent, have caused us to decide that after March, 1905, it will be best not to take on new students for say a couple of years.

As regards finances, a glance at the balance sheet will show that our position is very much the same as last year. We began with a balance in hand and we leave off with one. This is the result of rigid economy, and we sorely need much more apparatus for the successful teaching of many branches. By the kindness of a friend, Mrs. A. D. Philips, a special contribution of £10 is given to the purchase of large models of the eye and ear and of a microscope. And here let us say that we badly need three or four more microscopes with magnifying power of from 50 to 350 for use in the histology, pathology, and clinical medicine classes. Another need—one that obviously arises in a land where post mortem examinations are impossible—is that of good pathological plates and diagrams of naked eye morbid appearance. We are hoping someone will be able to send us a good pathological atlas. A set of Ellis' plates of anatomy is another desideratum, and also diagrams of histology for hanging on the wall. One pleasing feature on the income side of the balance sheet is that we have received \$365 in fees from the students or their friends. This sum is far larger than in former years, and shows that the advantages of a medical education are beginning to be realized.

Very hearty thanks are accorded to the many friends who during the

past year have contributed to the building fund. We now have some Taels 2,090 in hand on this account, and there is also a special donation of £1,000 from Mr. Harris, of Calne, which the school is to divide with the hospital. The generous help is greatly appreciated, and encourages us to look forward to the realization of our ideals. Much yet remains to be done however. In last year's report we spoke of needing £2,000 for proper medical school buildings and apparatus. Of this sum we now have about £800 in hand, so that some £1,200 yet remain to be raised; and again we commend our need to the sympathy of our generous friends at home.

Some two or three years ago there was started a branch of the

Y. M. C. A. here; it has now become largely identified with our students, and they have been greatly pleased by the coming of Mr. Clinton, who is settling in Hankow for the purpose of developing the Y. M. C. A. work in this important centre.

In conclusion, we expect to have more students applying to join the school next year, so that we shall probably have a larger number under our care than ever. This will mean an increase of work and responsibility, but we take it up for our Master's sake and are sure of one thing that the good hand of God, which has blessed us in the past will, in answer to the prayers of many, lead and uphold us in the future.

TROPICAL DISEASE—NEW BRITISH EXPEDITION.

Merchants of Liverpool have subscribed the cost of the largest expedition for the investigation of tropical disease ever sent out from that country. It has been organised by the Liverpool School of Tropical Medicine, and its energies will be distributed over a wide area. Professor Boyce, F.R.S., Dr. Evans, and Dr. Clarke are going to Sierra Leone, Gambia, &c. Colonel Giles, I.M.S., and Dr. MacConnell (Canada) will pursue their researches on the Gold Coast, in Lagos, and in Nigeria. Dr. Wolferton Thomas (Canada) and Dr. Anton Breinl (Prague) will go to the Amazon to further investigate questions relating to yellow fever and malarial fever generally. It will thus be seen that Canadians, and also a medical man from Hungary, are associating with Englishmen and Scotchmen in the enterprise.

In order to wish the members of the expedition God-speed, Mr. Lyttelton received them recently in his private room at the Colonial Office. Sir Alfred Jones, president of the Liverpool School of Tropical Medicine, made the introductions. He observed that the King of the Belgians had sent a somewhat similar expedition to the Congo, and various attempts had been made to investigate the causes and cure of yellow fever by expeditions to the Amazon. Other bands of devoted men had gone from their own countries to the tropics to battle with

diseases peculiar to the climate, but there had been no previous investigation of so comprehensive a character as that now contemplated.

The Colonial Secretary said no service could be more acceptable and honourable than that directed to making more safe and useful those regions to which Englishmen went out on behalf of the Empire. He remembered that Canadian teachers were sent out to help to educate the Boer children; and the present instance of Canadian and Britishers working side by side was an outward and visible sign of the cohesion and sympathy of the Empire as a great whole. He had much pleasure in receiving the deputation, and heartily bade them God-speed.

Personal Record.

BIRTHS.

- At the English Presbyterian Mission, Tainan, Formosa, on May 26th, the wife of JAMES L. MAXWELL, M.D., of a daughter (Mary Edith).
At Kuling, June 6th, 1905, to Dr. and Mrs. G. A. HUNTLEY, A. B. M. U., of Hanyang, a daughter (Gladys Emmie Christine).
At T'aichow, June 24th, 1905, to Dr. and Mrs. S. W. BABINGTON, C. M. S., a son.

ARRIVAL.

- At Shanghai, May 1st, Dr. and Mrs. HODGKIN, and child, F. F. M. A., and Y. M. C. A. work, West China.

DEPARTURE.

- May 10th, W. W. WILLIAMS, M.D., M. E. M., for America.
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MEDICAL MISSION STATISTICS: 1904.

[illegible]

The figures are all in Mexican dollars, unless otherwise stated.

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MALTA FEVER IN CHINA.

By H. W. BOONE, M.D., Shanghai.

During the last ten years a form of fever has occasionally appeared in one or another of my patients that has been a puzzle to me. It was not typhoid, not remittent, not simple continued fever. In fact one could eliminate one fever after another only to feel that he was not quite sure what it was that he had to deal with. The fever was obstinate, not amenable to treatment, and it was liable to recur after decided improvement had led to the hope that it was gone. The history of a couple of cases will show, better than any mere description, what a serious and also what an unusual type of disease it was.

(CASE 1).—B., aged 41, American, a man of fine physique, excellent habits and constitution. Had been living for years at one of the ports on the Yangtze River. He appeared on the 9th of July, 1901, with the history that he had been ailing for a few days—anorexia, nausea, constipation, slight cough, no sputa. On examining the lungs no dullness, but harsh respiratory sounds were found at the lower parts of both lungs. He complained of great weakness, some pain in the back. His spleen was a little enlarged, liver was normal, no albumen in urine. One peculiarity was the heavy perspirations; worst at night, and there were some sudamina. The temperature rose to 103 or 103.2 in the early afternoon, in the mornings it would be 99.1 or 99.5, but there was no regularity about the temperature. On one or two nights his wife thought that he had a little delirium, but it was slight. The patient was clear-headed, very despondent and listless. There were none of the usual symptoms of typhoid. Tongue clean, no tympanitis, no gurgling in iliac fossa, no spots, no diarrhoea; the temperature was not typhoid.

As he was seriously ill he was kept in bed on a diet of milk diluted with water; the bowels were moved by enemata, and he had a good nurse, daily baths. As the fever kept on and at the patient's request he was given 36 grains a day of *quinine* in solution for six days without any good effect. The *quinine* was then discontinued. The patient lost flesh and was quite weak. In the third week the temperature fell to normal, and he seemed better, but four days later his temperature went up, and he then complained of the most atrocious pains in his knee, wrist, ankle joints and in the shoulder. One or more joints would ache and be red and slightly swollen, then they would be better and some other joint would be attacked. He was given *morphia* hypodermically for the pain and full doses of the *salicylates*. They did no good, and were discontinued. As he was now quite weak he had milk punches, egg-nog with brandy, was given beef juice, and he had chicken and bread boiled to a jelly strained and given cold as a jelly. After ten days with the temperature from 103.5 down to 100.0 it dropped to a little below normal for two days; then went up again for a week, when it left him. He went on to Unzen and made a good recovery.

This patient was very ill; suffered great pain during the first relapse, and yet his mind was clear, the tongue clean, none of the symptoms usual in a typhoid case. His fever lasted for fifty days, and he had been ailing before that. Every now and then I have had just such cases. In some of them an examination failed to find any malarial parasite. In others large doses of *quinine* given for several days did no good. They were all treated on the supposition that they might be typhoid, with entire rest in bed, careful nursing and sponging, but they developed these profuse sweats and the severe joint pains, also sometimes pains were complained of in the region of the liver or spleen, or in the abdomen. The liver was enlarged as well as the spleen in several cases. All of my cases finally recovered.

(CASE 2).—November 25, 1904.—R., female, aged 24, one child. Has had good health. Felt feverish and ailing, with aching bones and anorexia for eight or nine days. Tongue slightly coated, pulse 90, temperature at 4 p.m. 101. Pain at McBurney's point. Can discover nothing by palpation, percussion, or bimanual examination by vagina and rectum. She has a slight cough and hard breathing at the bases of both lungs, no dullness. Rest in bed, use bed pan, milk diet, get a good nurse, sponging daily. Is very constipated, *calomel* 1 grain and repeat, followed by a saline cathartic. Hot fomentations over abdomen. 26th November.—Same, one stool. 27th.—Same, sweats so heavily that

her clothes are drenched with perspiration. Temperature in morning 98.3, evening 102.1, no malarial parasites in blood, feels chilly at times. 28th.—Morning 101, evening 103.2. Complains of the pain, slight pressure aggravates, deep pressure with the whole palm of the hand relieves it. At no time has she had tympanitis, gurgling in iliac fossa, spots, or dry or brown tongue. The spleen is a little enlarged. She has had hot douches for two days. 7 p.m.—Consultation with Dr. Reid. As she is still costive give large enemata; try full doses of *quinine* four times a day. After enema one large stool, mucus and scybala. 29th.—While taking the *quinine* temperature went up to 103.5. 30th November.—A large enema brought away more; scybala stools are quite natural in appearance. Tongue is clean, moist, red at edges, mind clear, pain in abdomen gone, pulse weak. December 2.—Is much the same, evening temperature 103.8, stop giving *quinine*, as it does no good. December 3.—Morning 101, evening 102. December 4th.—Morning 100.8, evening 102.5. December 6th.—Morning 100.4, evening 101.5. She is weak, give beef juice, brandy and milk. December 10th.—Morning 98.4, evening 101. December 11th.—Morning 98.4, evening 99.6. She felt much better; no sweats, takes food well, sits up in bed, no pain. December 12th.—Temperature went up to 101.2, heavy sweating, sharp pain in left ear and headache. The most careful examination with electric light reveals nothing wrong with the ear. She went on with irregular high temperature. Heavy sweats, shifting pains in bones, joints and intercostal regions. On the 18th temperature fell to 98.2, remained low till the 22nd December, then ran up again to 102.4. 24th and 25th.—Down to 99. On the 28th December temperature rose to 103.4. December 31st it fell to 98.9, and on January 1, 1905, it was 98. It ran low until the 12th, then went up to 100.8 for two days, then fell to normal and remained there till the 17th, when she appeared to be well. The fever lasted sixty-nine days. I have seen cases that lasted for 100 days. Now, for quite a number of years, I have been seeing just such cases from time to time. Called them simple continued fever, but was never satisfied with the diagnosis. Manson, revised edition, 1903, says: "I have seen cases in China having all the clinical symptoms of Malta fever. It is highly probable therefore that the same, or a similar fever, occurs in many other parts of the world, having been confounded hitherto with malarial fever or with typhoid. This conviction is based more on clinical than on laboratory observation. Experience has taught me to place little reliance on the serum reaction test as ordinarily applied." I shall offer no apology for quoting his description of this fever.

SYMPTOMS.—Malta fever begins generally with lassitude and malaise, such as we associate with the incubation of many specific fevers, particularly with typhoid. There is headache, boneache, anorexia, and so forth. At first the patient may go about his work as usual. Gradually the daily task becomes too much for him, and he has to take to bed. Headache may now become intense, and, in addition, the patient will suffer from thirst and constipation. At the commencement the symptoms, with the exception that there is very rarely diarrhoea, resemble those of typhoid. There are no rose spots, however, then or at any subsequent period. There is evidence in the coated tongue, the congested pharynx, the anorexia, and the epigastric tenderness of gastric catarrh, and the occasional cough and harsh, unsatisfactory breathing at the base of the lungs indicate some degree of bronchitis or of pulmonary congestion. There may also be delirium at night. The fever is usually of a remittent type, the thermometer rising towards evening and falling during the night, the patient becoming bathed in a profuse perspiration towards morning. The spleen and the liver, but especially the former, are somewhat enlarged and, perhaps, tender. Lumbar pain may be urgent.

After a week or two of this type of fever especially distinguished by pains and perspirations, the tongue begins to clean and the appetite to revive; but notwithstanding these signs of amendment the patient still remains listless and liable to headache and constipation. He continues feverish, and at times continues perspiring profusely. Gradually, however, although the patient is anæmic and weak, subjective symptoms become less urgent; he sleeps well now, he has no delirium at night, and he can take his food, and this although the body temperature may still range slightly above the normal. Then once more, and perhaps over and over again, fever with all the former symptoms gradually returns; and now, if it has not declared itself before, the peculiar fleeting rheumatic-like affection of the joints, so characteristic of the disease, shows itself in a large proportion of cases. One day a knee is hot, swollen, and tender; next day this joint may be well, but another joint is affected; and so this metastatic, rheumatic-like condition may go on until nearly all the joints of the body have been involved one after the other. The patient may suffer also from neuralgia in different nerves—intercostal, sciatic, and so on. Orchitis is an occasional complication. In some cases these complications are severe and characteristic; in others they may be mild, or absent altogether. In this respect the same infinite variety exists as in other specific fevers.

Perhaps the most characteristic feature of Malta fever is the peculiar behaviour of the temperature. In a mild case there may be a gradual ladder-like rise through a week or ten days to 103° or 104° , and then through another week or so, a gradual ladder-like fall to normal, the fever, which is of a continued or slightly remittent type, leaving for good without complication of any sort in about three weeks. Such mild cases are the exception. Usually, after a few days of apyrexia, absolute or relative, the fever wakes up again and runs a similar course; the relapse being in its turn followed by an interval of apyrexia, which is again followed by another relapse; and so on during several months. This is the "undulant" type from which Hughes derived the name he suggested for the disease—*febris undulans*.

In another class of case a continued fever persists for one, two, or more months, with or without the usual rheumatic, sudoral, and other concomitants—the "continued" type of Hughes.

Generally remittent or nearly continued in type, in a proportion of instances the fever exhibits distinct daily intermissions, the temperature chart suggesting some septic invasion or an ordinary intermittent malarial fever. But there is no local evidence of suppuration to be found; neither, if we examine the blood, is

the malaria parasite to be discovered; nor is the quotidian rise of temperature accompanied by an ague-like rigor, or at most only by a feeling of chilliness; nor is the disease in any way amenable to *quinine*. This is the "intermittent" type of Hughes. In other instances these types may be variously blended.

In some patients, not months merely, but years, may elapse before they are finally rid of the tendency to febrile attacks and characteristic pains and aches. Many of our sailors and soldiers are permanently invalided from the services on this account.

SEQUELÆ AND MORTALITY.—As a rule, by far the most serious consequences of Malta fever are the debility in entails, the profound anæmia, the rheumatic-like pains, and the neuralgiæ. There is little risk to life; the mortality does not exceed 2 per cent. When death occurs it is usually from suddenly developed hyperpyrexia; occasionally it is brought about by exhaustion, by hemorrhages and purpuric conditions, or by some pulmonary complication such as pneumonia. In a few instances the fever is of a fulminating type, rapidly ending in death from hyperpyrexia. Hughes, in his elaborate monograph, designates such cases 'malignant.'

ETIOLOGY.

Surgeon-Major David Bruce, British Army, says:—"The micro-organism of Malta fever (*micrococcus melitensis*) was first discovered by me in Malta in 1887, and since then its constant occurrence in the organs of fatal cases of this fever has been verified in the same island by various observers. During the last ten years the evidence accumulated goes to prove that this organism is undoubtedly the *causa vera* of Malta fever. The micrococcus may be described as round or slightly oval in form, and measures in dried preparations about 0.3 in diameter. Viewed in a drop of water unstained, the microbes are seen as bright points in active molecular movement; the great majority of them single, a few in pairs, but never in chains.

"Surgeon-Captain Hughes has also been successful in transmitting Malta fever to monkeys in several cases. In all seven monkeys have been inoculated with pure cultures of the micrococcus—four by Surgeon-Captain Hughes and three by myself. Of these, four died with all the symptoms of the fever as observed in man, and from their organs the same microbe was recovered in a state of pure culture. The other three monkeys recovered after a more or less severe illness, in two cases lasting two and a-half and three months respectively, and according to Surgeon-Captain Hughes' statement showing in a remarkable manner the typical intermittent waves of pyrexia as observed in man.

"From the above considerations sufficient evidence has, in my opinion, been brought forward to show that the micrococcus above described is the cause of Malta fever, and is the strongest evidence yet adduced to show that this disease is a specific fever, quite distinct from typhoid or malaria.

" Principally through the labors of Professor Wright, a valuable aid in the diagnosis of Malta fever has been discovered in the agglutinating and sedimenting power of the serum of patients suffering, or who have lately suffered from the disease on cultures of *micrococcus melitensis*."

Bruce says no characteristic lesion of typhoid fever is found. Hughes says the spleen is enlarged. Our knowledge of the morbid anatomy of this fever is not yet settled.

This disease has been found in India, China, the West Indies, Brazil, the United States, and in England.

TREATMENT.

Manson says:—" When the diagnosis is sure it is well to give a purge, none better than *calomel* and *jalap*, and to instruct the attendants to keep the patient's temperature systematically below 103° by cold sponging with vinegar and water, or, if necessary, by cold bath or ice variously applied. "*Quinine* and, on account of the joint affection, the *salicylates* are very generally prescribed. Both are useless, if not injurious. Any threat of hyperpyrexia is best met as directed, namely, by early employment of sponging, the wet pack, or, if necessary, by the cold bath. Sleeplessness may demand hypnotics; headache, if severe, moderate doses of antipyrin; inflamed joints or testes, the usual local applications; constipation, enemata or aperients. In fact the treatment of Malta fever resolves itself into a treatment of symptoms. The diet at first should consist of milk, later of broths and eggs and, if necessary, stimulants. Solids must not be freely given until high fever has disappeared and the tongue has remained clean for at least ten days. Lemonade or lime juice should be given after a time, not merely as a pleasant thirst relieving beverage, but with a view to averting scurvy, not at all an improbable complication if the diet is too restricted over a long period. The return to solid food must be made with the greatest circumspection; imprudence in this respect may bring on a relapse. Exercise or anything tending to induce fatigue is prone to provoke relapse if indulged in prematurely."

The above directions as to treatment are so good, and they so fully coincide with what my own experience has led me to do, that I believe they will meet all the requirements of these cases. I found that most of my cases had some gastric disturbances, and that it was well to dilute the milk with aerated water or with lime water. I also gave them orange juice in water as a pleasant change from the lemonade which they had to drink. The patients are listless, and as time goes on they get despondent. Much may be done to help them by telling them that

almost every case gets well no matter how long the fever may last, and that it is only a question of time when they will be quite well again.

The two cases related were both of foreigners—one a prominent physician, the other an intelligent and cultivated lady. They were selected out of a number for the reason that one can get a more full and complete history, and that the treatment will be more fully carried out than in the case of Chinese, where the friends are more apt to meddle with the diet and the details of the treatment. This disease is a long and a severe one, very trying to the patient and to the doctor; at times it is accompanied by severe suffering from the inflamed joints, or the intercostal lumbar or other neuralgias.

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Discussion.

Dr. Neal rose to thank Dr. Boone for calling our attention to this unusual fever.

Dr. Boone was asked whether he had seen Malta fever in children and in Chinese adults.

Dr. Boone had seen fever in children lasting two years, but it differed from Malta fever in having no joint pains. One such case he had diagnosed as "Chronic Catarrhal Enteritis," a condition well described in Ashby and Wright's book on children's diseases. I sent the child to America. Dr. Osler saw the patient and confirmed the diagnosis. This little patient suffered from the age of five years till eight years old. An out-door life and simple diet resulted in great improvement. He had seen cases of Malta fever amongst the Chinese.

Dr. Layton had found it in the Congo Valley; the importance of diagnosis is apparent when we remember that *quinine* only does harm. He had seen it confounded with malaria and also dengue fever. The joint symptoms he considered to be the leading feature and the best treatment hydrotherapy.

Dr. Boone mentioned that there was a microscopical specimen now in the Laboratory in Shanghai.



SYMPTOMATOLOGY AND TREATMENT OF DIGESTIVE DISTURBANCES.

By W. H. VENABLE, M.D., Kashing.

It is not my intention to give even a moderately complete *résumé* of our present knowledge of the subject under discussion, but merely to call attention to some important points in the symptomatology and treatment of some of the commoner digestive disturbances. Many of these points are mentioned but briefly, if at all, in most of our text books.

One of the most important symptoms of digestive disturbance is pain or a feeling of weight or oppression in the epigastrium to the right or left of sternum, in either shoulder blade or in the vertebræ between the shoulder blades. It may come on at any time, but is most frequent during the night or the early morning hours. Several different causes have been assigned for this pain. In the majority of cases it is probably of reflex origin, due to the irritation of the gastric mucous membrane by distention with gas or by the abnormal acids present.

A symptom somewhat similar to this is a feeling of excessive weariness without sufficient cause, such as physical exercise. As the patient often expresses it, "I can hardly drag one foot after the other." This is strictly analogous to physical fatigue, which we know is due to the overloading of the blood by the toxic products of muscle oxidation. The patient, usually having experienced a similar feeling in an attack of malaria, betakes himself to *quinine*, which by the help of the *vis medicatrix naturæ*, and perhaps a little additional care in regard to his diet, puts an end to the intestinal fermentation and also to the "tired feeling." The patient mentally records another attack of malaria cured, and all the doctors in the world cannot convince him that he is wrong.

Headache I will merely mention to say that the most characteristic form is that which comes on during the night and usually disappears a short while after getting up in the morning.'

Attacks of that strange and interesting disease migraine may occur. It is interesting here to note that the theory has been lately advanced that migraine is always accompanied by and is probably due to a temporary dilatation of the stomach.¹

The symptom of vomiting need not be dwelt on at length, but I would like to call attention to the fact that the green color that is often seen in the vomited matter is usually not due to bile, but to a mold that

can be easily detected with the microscope. There is another variety of mold which gives a brown or reddish color to the vomited matter, and is apt to be mistaken for discolored blood. I have seen this variety once. I supposed at first that it was precipitated oil of coffee, as the patient had taken nothing but a cup of coffee for his breakfast, but a glance through the microscope dispelled the delusion.

The presence of indican in the urine is a symptom that should be mentioned. There is an article on this subject in a recent number of the *Post-Graduate Medical Magazine*.² It seemed to be the unanimous opinion of all who took part in the discussion, following the reading of this paper, that there was no question of the value of indican in the urine as an index of putrefaction in the intestine. The test given in this article is as follows:—Mix in a test tube equal quantities of urine and chemically pure *hydrochloric acid*. To this mixture add one or two drops of a one-half per cent solution of *potassium permanganate*. If indican is present in the urine there will be formed a purplish cloud in the fluid in the test tube. If to this there is added a few drops of *chloroform*, this purplish coloration will be replaced by a deep blue coloration, which is due to a precipitation of the indican by the *chloroform*; the amount and the intensity of the precipitated indican determining the extent of the putrefactive fermentation in the intestinal tract.

An important point, which I think is often overlooked or forgotten, is that the symptoms of indigestion may not come on for a considerable time (two or three days or longer) after eating some indigestible article of food. I would like to call your attention to the frequency with which insomnia occurs as a symptom of digestive disturbance. This subject has by no means received the attention that it deserves, though many of us have heard from earliest childhood the couplet—

To be easy at night
Let your supper be light.

The subject of insomnia calls to my mind the great difficulty that one often has in convincing a patient, who has a rather unusual symptom of digestive disturbance, of the true nature of his trouble. Worse than that, the doctor is often misled by the patient's statement that his digestion is perfect. A patient (not Chinese) once applied to me for treatment for insomnia. I questioned him about his digestion, but he answered all my questions with the remark that his digestion was all right. A few days later I found out from a casual remark of his, to which he seemed to attach no importance, that for some days he had been suffering from sour stomach and vomiting usually about bedtime.

In a brief but interesting article on what he calls "Toxic Neurasthenia"³ Starr remarks: "During the night the curve of depression falls to its lowest level, so that at 4 a.m., when these patients commonly awake, they are in the deepest distress of mind and are suffering the greatest discomfort of body." Another remark in the article just quoted identifies it still more closely with the subject under consideration. It is this, "In these cases, at all times, the urine contains large quantities of indican."

I will not stop to mention the many other important symptoms of disturbance of the digestive function, as they are already familiar to us all, but will pass on to the subject of

TREATMENT.

In no other class of diseases more than the one now under consideration does the physician need to be *definite* and *specific* in his directions to his patients. A large part of the treatment of digestive troubles may be covered by the statement, "Eat the proper kind of food in proper quantities and in the proper way." A physician may have an accurate knowledge of all that is included in this comprehensive statement, but if he has not the knack of imparting this knowledge to his patient in the shape of definite directions, the treatment is apt to result in failure. Then we must not let our sympathy for the patient make us hesitate to tell him, firmly and positively, that he must give up what are probably his favorite dishes. We must have confidence enough in the diet which we prescribe to know that it is sufficient for the maintenance of all the bodily functions. Patients can hardly be possessed of a more pernicious idea than that certain articles of diet are necessary for keeping up certain functions of the body. How much indigestion is caused by patients loading their stomachs with quantities of "indigestion fuel," in the shape of syrupy prunes or possibly the most acid fruits they can find, or the toughest and most indigestible vegetables, for fear they will become constipated wrecks, is not for me to say, but it is a point we need to watch.

In treating digestive disturbances, especially here in the East, we are apt to fail if we underrate the importance of the nervous element as a factor in causing these troubles. I am convinced that worry and mental strain cause a great many of the digestive disturbances that we are called upon to treat. They may also have the effect of keeping up indigestion that has been originated by other causes. We should therefore impress upon our patients the importance of avoiding all worry and of cultivating cheerful dispositions.

Bodily exercise and mental rest and relaxation need not be dwelt upon here, as I trust their extreme importance is realized by us all.

As to the proper kind of food, sufficient stress has not been laid upon the fact that enfeebled digestive organs, with the same amount of work, can get far more nutriment out of animal than out of vegetable food. We have had too much fear of the results of the putrefactive fermentation of the proteid molecule in the intestine. A large amount of proteid may be taken without any resulting putrefactive fermentation, provided the carbohydrates and fats be kept at a minimum. On the other hand, when taking large quantities of carbohydrates, we have every reason to fear the deadly proteid molecule, as the carbohydrates, being more easily oxidized than the proteids, will seize upon all the available oxygen in the system and leave the proteids to decompose and form all sorts of poisonous products. Now what we want is a diet that will give the largest results with the smallest amount of work on the part of the digestive organs. By reducing carbohydrates and fats to a minimum we can introduce into the system a comparatively large amount of proteid without any fear of that train of evils usually ascribed to eating too much meat. Dr. W. H. Porter, of the Post-Graduate Medical School of New York, has devoted a great deal of effort to the working out of this theory along sound physiological lines.

The diet which he suggests for these cases is substantially as follows :—

- Breakfast.*— 2 ounces of stale light bread or toast,
2 eggs,
8 ounces of milk,
Dinner.— 3 ounces of bread,
1/4 to 1/2 lb. of tender beef, or other meat,
8 ounces of milk.
Supper.— 2 ounces of bread,
1/4 to 1/2 lb. of beef,
8 ounces of milk.
At bed time.—8 ounces of milk.

Other digestible kinds of meat may be substituted for beef. As the patient improves one vegetable may be added to the mid-day meal; a corresponding reduction being made in the quantity of the other articles of diet. All sweets and fruits and most vegetables are forbidden. Some of the more digestible vegetables, such as thoroughly cooked cauliflower and spinach, are allowed. Onions and cabbage are regarded as especially harmful. Porridge is forbidden. Potatoes are not allowed (1), because being so easily oxidized they will seize upon the available oxygen and leave the proteids to decompose; (2) because they are usually eaten at all three meals and in unreasonably large quantities.

The article to which I would take exception in the above diet sheet is the milk. Here in China, where most of our milk is boiled, I consider it one of the most indigestible articles of food I could give to a patient suffering with indigestion. My observations in the United States also lead me to think that even unboiled milk is not as digestible as it is generally supposed to be, at least for adults. I heartily agree with his condemnation of porridge as a food for patients suffering from indigestion. I think it is one of the worst things we can give these patients, especially when heavily sweetened as it usually is, though it is indigestible enough even without the sugar. I know of one prominent authority who even goes so far as to say: "Oatmeal is the most indigestible of all known substances, for with oatmeal there is a loss of eighty per cent as compared with the amount ingested." Then the mere fact that porridge is rarely, if ever as thoroughly chewed and mixed with saliva as the drier forms of starchy food, makes it unsuitable for this class of patients. There is probably no kind of food that excites as free a flow of saliva as dry crackers or toast, so we should advise our patients to take their starchy food in this form rather than in the form of porridge. In general, food that has to be thoroughly chewed before it can be swallowed comfortably, provided it is not tough or indigestible, agrees with these patients far better than a liquid or soft diet. Usually soups do not agree with them well, especially rich soups. It is best to prohibit tea entirely. Coffee often has the immediate effect of stimulating digestion, especially in persons accustomed to take it, and when taken with little or no milk or sugar, but if care is not taken to restrict the amount it may impair the digestion by overstimulation of the nervous system, or the essential oil of which it contains a large quantity may cause intestinal indigestion.

In our early medical studies we were taught that red meats were more harmful than white meats in both digestive and assimilative troubles. The results of modern research make us wonder whether we may not regard this theory as pretty well exploded. In a not very recent article⁴ I noticed this statement: "Careful experimentation upon the human subject has demonstrated conclusively that the proteid of beefsteak, or red meat, is the most easily digested, assimilated and oxidized of all the proteids, the loss being only two per cent. Eggs rank next, and milk comes third on the list. . . . Consequently the real question at issue is what form of proteid can be most easily transformed into a peptone with the least expenditure of digestive energy. This has been settled in the order above named by the experiments of König, Rabner, Hofmann, Strümpell, Prausnitz, Meyer, Monk, Atwater,

Chittenden, Cummius and others. In the vegetable class wheat ranks first, but is still considered behind the animal class.''

Practical difficulties will be met in trying to put a patient upon a strict diet of any kind, and in no other class of troubles will the tact and firmness of the physician, as well as his confidence in his own treatment, be put to a severer test. The patient will naturally think he is being starved. While he was in good health he probably ate a great deal more than he actually needed, and in this way he got an exaggerated idea of the amount of food required to keep him going. Then of course it is natural that patients should gauge the amount of food they need by their appetites, and usually, though not always, these patients have appetites far beyond their digestive powers.

Another difficulty is that a certain proportion of patients will hold up their hands in horror, and tell the physician that on such a diet as the one which has been suggested they would die of constipation. They have probably been in the habit of stimulating their intestines by a large amount of vegetable fibre or by fruits and sweets which in most cases act by setting up abnormal fermentation in the intestine. These patients will suffer with constipation when they suddenly stop this abnormal stimulation of the intestines. It will be fortunate for the physician if he can succeed in convincing his patient that these abnormal stimulants are not necessary in order to prevent constipation. At this juncture it may be necessary with some patients to gradually get the system under the influence of a mild laxative to prevent him from becoming discouraged. Other patients of larger faith may be persuaded to dispense with the laxative, and submit to the temporary constipation with the assurance that in time the intestine will learn the long neglected lesson that it has got to do the work that nature gave it to do without this constant overstimulation. Looking over the articles of diet in the diet sheet given above would give us the impression that a large proportion of all of them would be absorbed and leave a very small residue, but experience has shown that such is not the case. The residue is comparatively large, considering the digestible nature of the articles. Practically constipation is probably never caused by eating too little, but, on the other hand, probably the most fertile cause of constipation known is overloading of the stomach and intestines, especially when associated with neglect of bodily exercise.

Another cause of constipation which is important, and which is exceedingly different to deal with, is a blue, melancholy disposition, a tendency to be despondent and discouraged and to look on the dark side of everything. I am not forgetting that constipation may cause

these symptoms. We need to keep our eyes wide open here to distinguish between cause and effect, and sometimes we shall find them interdependent. Unless we can make these patients see the importance of taking a more cheerful view of life we can have very little hope of curing either their constipation or their indigestion. It is probably this class of patients that are in most danger of sitophobia, or a tendency to nearly starve themselves from a morbid fear that everything they eat will give them indigestion.

I have very little to say about the medicinal treatment of digestive disturbances, except to remark that it is usually overdone and often can be omitted altogether. Much of the medication used simply adds fuel to the fire, though we may sometimes assist nature to effect a cure by the judicious use of remedies which we are sure will do no harm. I have sometimes found *nitrate of silver* or *strychnine* beneficial in atonic cases. *Bismuth* often does good, and is apparently incapable of doing any harm. Whenever drugs are used it should be with the distinct understanding that it is merely with the idea of putting a little sand on the track to get the wheels started, and not with the idea of keeping them up indefinitely.

If I should be asked to name the most important point in the treatment of digestive disturbances, I am afraid I should have to decline the honor of attempting to answer the question, because to name one point as the most important would be to assign to an equally important point a secondary place. Dieting alone will utterly fail to cure a patient of this kind unless he learns to maintain a healthy and cheerful frame of mind. On the other hand, maintaining a cheerful and healthy frame of mind will not enable a patient to eat all kinds of indigestible food with impunity.

But while neither of these two points alone could be named as the most important in the treatment of these troubles, the two taken together can fairly be said to tower above all others in importance.

In a word, then, we may say to our patients that the avoidance of these troubles lies in heading the limitations that the Creator has set to our bodily activities and functions, and in obeying the command, "Casting all your anxiety upon Him, because He careth for you."

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PERFORATION OF THE INTESTINE FOLLOWING STRANGULATED HERNIA WITH FORMATION OF FÆCAL FISTULA.

By A. G. HEARN, M.D., Huchow.

It is the intention of the present paper to review some of the conditions under which the obstructed intestine is perforated during strangulated hernia. Also the destructive processes that occur during nature's efforts to ward off the abnormal condition.

1. External pressure upon the intestine.
2. Internal pressure upon the intestine.
3. Peritonitis.
4. Presence of omentum in the hernial sac.
5. Chronic catarrhal inflammation of the intestine.

1. *External Pressure.*—This may be produced by the pressure of a tumor of any of the organs at the site of the strangulation of the bowel. There may have been peritoneal bands of the intestine which had existed for some time, and during an acute inflammation these bands add very much to the over-congested parts. The presence of an abscess or ascites may be mentioned. The pressure of bandages, or the hard, rough, tightly-fitting plasters so often used by the native doctors, may be quite an exciting cause for perforation. Or may I suggest that taxis, practiced at a late hour after the strangulation, is responsible for some of the perforations?

2. *Internal Pressure.*—When a portion of intestine has been forced through an opening there is a disturbance in the blood supply to the bowel and a serious exudation follows. The formation of gases and fluids within the strangulated portion of the intestine increases its size and diminishes nutrition of the parts.

That there is a toxic influence which paralyzes possibly both the muscle in the wall of the bowel and its local nerve-supply is shown by the fact that general toxemia is met with in some cases. This general septicæmia is caused by the absorption of the contents of the afferent portion of the intestine.

3. *Peritonitis.*—Acute local peritonitis is one of the principal changes that must occur in order that the perforation may result in a life-saving issue. After twenty-four hours of peritonitis there is a decided congestion of the peritoneum, more serum is found in its cavity, and a thicker layer of fibrin and pus on the surface. Microscopical examination shows two sets of changes occurring at the same time: (a) A production

of fibrin, serum, and pus; (b) a swelling and multiplication of endothelial cells. If the inflammation is very intense, the pus and fibrin are most abundant; if the inflammation is milder, the changes in the endothelium are more marked. The white cells infiltrate through the stroma and find their way through to the surface of the peritoneum, there being no change in the connective-tissue cells.

If death takes place in the early onset of the disease there is general congestion, pus, fibrin, and serum, the desquamation and multiplication of the endothelial cells. If death occurs at a latter time the changes are practically the same, with perhaps the extravasation of blood and an increase in the size of the connective-tissue cells. The quantity of purulent serum in the peritoneal cavity may be small or large, and this serum may contain few or many pus cells, or the serum may be of a dirty-brown color and filled with bacteria. Where the purulent serum is shut in by adhesion it is often thick and yellow, like the pus of an abscess. Many kinds of bacteria have been found in the exudate in acute exudative peritonitis, but the importance is very uncertain because of the liability to contamination, either before or after death, by the germs in the intestinal contents. *Streptococcus* and the *bacillus coli communis* are most frequently found.

4. *Presence of Omentum in the Herniated Sac.*—Where this very vascular structure has been forced through the opening and covering the bowel there are degenerative changes which occur first in the portion of omentum.

It is a fact that most of the cases that form a fistula of the intestine, by gangrene, are those preceded in this way by the omentum, which first becomes gangrenous. Death of these tissues, including the bowel, necessarily means a sloughing of the affected parts and the formation of a fistula or fistulas, or in most cases death of the patient.

5. *Chronic Catarrhal Inflammation of the Intestine.*—If this disease has existed previous to the attack of strangulation the wall is weakened, and especially where an ulcer was formed. The cæcum is probably oftener the site of such ulcers than any other portion of intestine, and is usually caused by impacted feces. At first the mucous membrane undergoes the ordinary changes of chronic catarrhal inflammation; then there is a slow suppurative inflammation which extends through the wall of the intestine and produces ulcers and perforation. Should such an inflammation of the intestine exist before this part of the bowel became strangulated it would hasten the time of perforation.

Case presented, a man, aged 41, a native, first seen by me July 8th, 1903.—He had suffered with chronic malaria for several years at the age of 21; he had typhoid fever. He had had a reducible oblique inguinal hernia on either side ever since he could remember. Patient's trouble dates from January 6th, 1903, when the right hernia became strangulated. Ten days later a native doctor passed a needle into the hernia, but was not followed with any relief. January 24th patient noticed fluids passing through the opening at the side of the needle puncture, and in a few days there were six openings through the skin. The whole contents of the bowel came through these fistulas, together with pus. The upper fistula being near the outer border of Poupart's ligament, the lower one under the symphysis pubis and to the right of the right scrotum. Patient's general physical condition was very much weakened, for which treatment was given. December 1st, following, he entered the Huchow hospital. December 18th, 1903, I operated upon him, Dr. M. D. Eubank assisting. *Chloroform* was used for anæsthesia. An incision was made parallel to and three-quarters of an inch above Poupart's ligament and almost its entire length. The cæcum was adhered over the external abdominal ring about five inches from the ileo-cæcal valve, where a perforation of the cæcum one and one-half inches in diameter was found. With the index finger these adhesions were separated. The margins of the perforation were irregular, the intestine was thickened, the peritoneum looked white and thickened at the site of the cicatricial ring.

After trimming away the rough edges of the opening the intestine was closed with the Czerny-Lambert sutures. An ordinary sewing needle, armed with black silk thread, was used. The peritoneum was closed with catgut; the muscles and skin were closed separately. The fistulas were cauterized with carbolic acid. There was little shock following the operation, but the patient was given a saline solution per infusion the same night.

For several days the pulse was irregular, but became regular, and the rate was 105. Temperature did not rise above 100 Fahr. at any time; it was subnormal the first days. The wound was dressed the third day and every other day subsequently. Patient was given a liquid diet for ten days after operation. His recovery was uneventful, and he was discharged entirely cured ten weeks after the operation.



AN UNDESCRIBED TUMOUR OF THE UPPER JAW.

By JAMES L. MAXWELL, M.D.

Iáp Keh, a Chinese woman, aged 47, was admitted to the Tai-nan mission hospital on December 19th, 1904, suffering from a tumour of the left side of the face.

Before giving the history I may note that she was, to all appearance, an exceptionally bright and healthy woman in a country where so large a proportion of the population are debilitated by the ravages of palludial disease.

The history she gave was that four or five years ago a small lump began to form on the left side of her face, about an inch to the left and a little above the level of the angle of the nostril; that it had grown steadily since then; that it had not caused her much pain, but she had come to hospital principally for the inconvenience caused by the large mass.

She further stated that the teeth of the left upper jaw had gradually become loose and she had pulled them out herself, this operation being accompanied by very little loss of blood.

In reference to a large scar over the most prominent part of the tumour, she said that this was caused by the application of a native cauterising paste by a Chinese doctor, that the skin had been temporarily destroyed, but the wound had rapidly healed. She has been unable for some months to breathe through the left nostril.

On examination the present condition was found as follows:—

A healthy woman, with no other swelling or disease to be found than the tumour about to be described.

Her thyroid gland appeared to be normal in size.

From her left face there protrudes a tumour about the size of a cricket ball, or perhaps it would be better described as roughly pear-shaped, dependent from the suppurating maxillary bone and reaching to about the lower level of the mandible, stretching the skin of the cheek, making it tense and attenuated. On the outside the tumour rather hid the malar bone, but did not pass to any extent into the temporal fossa above; the orbital opening was much narrowed from above downwards; as, however, the eye showed no tendency to protrude I concluded that it was principally the lower and anterior edge which was affected and which indeed was rough and nodular. On the inner side the left nostril was compressed by the growth which apparently did not protrude into

it. Below was the situation which gave most anxiety; the alveolar process was greatly enlarged in its width, the tumour raising up the lip a little. The palate had a mass, dome-shaped, descending at its lowest point about three-quarters of an inch from the palate. It extended fully to the middle line, and behind involved the soft palate of the same side for about half its antero-posterior diameter.

The skin of face and lip was freely moveable all over the tumour, except at the most prominent point on the face where the large scar already mentioned was present. The neighbouring lymphatic glands were not enlarged.

It was evident at once that this was not quite an ordinary case. It seemed likely to be malignant tumour, and yet the history was too long for sarcoma, and the age of the patient was rather against this latter. Then, too, it did not follow the rule of usual malignant tumours of the antrum, which do not commonly protrude greatly on the facial aspect as this did, and, on the other hand, generally protrude the eye which this did not.

Another remarkable feature of the case was that though a large ulcerated spot had been found by the application of native caustics, this had healed completely, and there had been no fungating mass protruded from it.

It so happened that within the previous four weeks we had two cases of tumour of the upper jaw in hospital. One a sarcoma of the ordinary type, which had unfortunately outside the hospital been incised on the facial aspect, with the result that in two or three weeks a fungating mass had been protruded which almost completely filled the mouth. The other, a case of dentigerous cyst, which as in the present case bulged largely on the face and slightly on the palate, but this latter case had had a history of twenty years.

It seemed then that the present case was intermediate between these two. I therefore decided to first make a small incision and remove a piece for examination and then settle what was to be done.

Chloroform was therefore administered on December 24th, 1904, and a small curved incision made in the cheek, the flap lifted, and a piece of the tumour, large enough for microscopic examination, removed and the wound closed with sutures.

The exact description I will defer till later.

I at once told the woman that I thought the only chance was to excise the whole upper jaw on that side, and that, as the operation was a very risky one, she must return home and bring her husband to consult on the matter before I could think of the operation.

She left hospital and returned again in a few days' time without her husband. On my asking the reason for his not coming she bared her arms and showed me numerous bruises, saying that her husband had beaten her for returning in the same condition in which she left, and she was determined to have the operation performed.

I again pointed out to her the risk, taking Butlin's estimate for removal of the upper jaw in malignant cases—an immediate mortality of thirty per cent. Nothing, however, would dissuade her, so I arranged to do the operation.

On January 10th, 1905, *chloroform* was again administered by my senior uative assistant, and the usual incision for removal of the upper jaw made. The first part was made rather difficult by the firm adhesions of the old ulcerated skin to the tumour, and the enormous flap that had to be turned back before the tumour was exposed.

The nasal process of the superior maxilla was then cut through with bone forceps, the orbital plate divided as far back as possible with a chisel, and the malar bone sawn through a good deal higher up than is usually necessary.

The incision in the nose was then made. The palate divided very quickly, cutting the soft palate clear behind the tumour, and the whole mass wrenched away with the hands, as the lion forceps, at the critical moment, proved too small to grasp so large a tumour. Bleeding was for a minute very free, but was easily controlled. The remnants of the soft palate were then drawn together with sutures, this being necessary to prevent the opposite side from falling down and to get a cavity which would hold a plug and the skin incision closed after light iodoform gauge plugs had been inserted.

The plugs were removed at the end of twenty-four hours.

Convalescence was most satisfactory, though it was some time before the patient could swallow solids with any comfort.

The mass removed proved to be a solid tumour of firm consistency, the origin of which could not be seen on section. It was roughly oblong, the largest diameter being the antero-posterior one.

The exact measurements are as follows :—

Extreme measure—antero-posterior diameter	...	10.25 centim.
" " lateral diameter	... ..	7.00 "
From orbital plate to most prominent point of facial aspect of tumour	... ..	9.00 "

Before giving an account of its microscopic features, I should like to refer briefly to the usual malignant tumours of the upper jaw from their microscopic aspect.

Three forms of sarcoma and two or three of carcinoma are usually described. But I should like to point out at once that as far as the carcinomatous tumours go the descriptions of even the largest text-books of surgery are poor in the extreme and the bibliography seems to be very limited; this no doubt is due to the great rarity of the tumours.

With regard to the *sarcomata*. These do not affect the case here described, and may be dismissed in a word. They are usually described as "myeloid," or "giant celled," "round celled," and "spindle celled," the second being far away the commonest variety.

The *carcinomata* are usually described as of two types—the squamous celled variety, commencing in the gingival mucous membrane and thence invading the antrum; and a medullary or encephaloid carcinoma, consisting of a very rapidly growing soft, almost hæmorrhagic, tumour, early involving the skin of the face which ulcerates, leading to a horrible fungating mass. I quote the following sentences from Walsham and Power's Surgical Pathology: "In carcinomata of the upper jaw the new growth replaces the structures which it destroys, but seldom grows so far beyond or out of them as to produce actual swelling, except such as may be mistaken for the effects of inflammation and necrosis of the bone. The lymphatic glands are only rarely affected. The disease runs its course very rapidly." In addition to these forms there is a variety of carcinoma known as "boring epithelioma" which grows with extraordinary rapidity, throwing out extensive runners in all directions, and at a very early date burst through the skin of the face, which is greatly infiltrated by the disease. Its exact pathology is not clear.

Now it may be seen at once that the tumour in question in no way answers to this description. The following salient points should be noted:—

1. A definite history of four years' duration as a tumour on the face.
2. A large tumour on the facial aspect.
3. No appearance of inflammation in the skin of the face; in fact, no involvement whatever of that skin.
4. This is made still more striking when we remember that a large ulcerated surface was artificially made over the summit of the tumour, and yet the latter showed no tendency to fungate through it.
5. A tumour—see the specimen itself—with no out-runners, very fairly encapsuled, and of that definite rounded shape which in itself bespeaks slow growth.

With this in explanation you will be prepared for a correspondingly rare appearance in the microscopic sections. For myself I must say that though I can claim some considerable experience in surgical pathology at home, and although since coming to the East I have had practically

every tumour removed in our large Tai-nan hospital, cut and examined by myself, yet I am quite unprepared to put any name to the specimen.

The section for the mass is composed of tubes lined by a single layer, perhaps in some cases more of epithelium of a rather flattened type. I am not satisfied myself that there is any real ingrowth into these tubes, and believe that, where there appears to be this, it is only due to a thick or oblique section. There is no outgrowth through the limiting membrane of the tubules.

Now compare this in your own minds with the ordinary adenocarcinoma, so commonly seen say in tumours of the heart. Here the tubes are filled with cells, which at a very early date burst through the gland or duct membrane and ramify through the tissues.

It might be well just to refresh our minds on the subject of the appearances of cancer generally, and I shall therefore read the following short extract from that most distinguished writer on tumours, Mr. Bland Sutton, taken from the new *Encyclopedia Medica*. It runs as follows:—

The microscopic structure of cancer is very simple, for it consists of columns of cells, so that when these columns are cut at right angles the section has the appearance of a number of alveolar spaces FILLED with epithelium. The walls of these alveoli consist of fibrous tissue of varying degrees of density in different species of cancer. These cell columns are not always simple, but branch and ramify in different directions. A striking feature of cancer is the fact that it is not circumscribed, and it is not possible, in naked eye examination, to define the limits between the tumour and the surrounding tissues.

I venture to say that the sections here shown of the tumour I am describing in no way answer to these descriptions.

Note one more peculiarity, viz., what appears to be here and there a small mass of colloid material in the tubules.

I have provided one other section, with which please compare the specimens here shown. It is a section of normal thyroid gland. The likeness is to my mind very marked.

My patient has no tumour or fulness about the thyroid gland which could possibly give rise to secondary deposit; and such deposits, when they do occur secondary to thyroid adenomata, are very vascular, often to the extent of presenting pulsatile movements. What have we here then? I am driven to the conclusion that we must name the specimen *An Adenoma of the Superior Maxilla*. Beyond that for me to go would be pure speculation.

I trust that some one may be able to throw further light on the origiu, form, and prognoosis of the tumour.

Medical and Surgical Progress.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

In the *British Medical Journal* for March 11th, 1905, there appears an article entitled "Some Practical Aspects of Conjunctival Bacteriology," by Freeland Fergus, M.D., F.R.S.E. The paper seems a peculiarly valuable one for those who, living in the East, must undertake a large number of intraocular operations. I shall therefore quote somewhat extensively from the article in question.

After some preliminary remarks the writer says:—

Bacteriology should be in daily use in every eye clinic; first, because it is an important aid to diagnosis; secondly, because it is a guide in determining the safety of any operation; thirdly, because it materially influences our views of treatment.

1. The classification of conjunctival inflammations becomes more and more a bacteriological one. By no other process can we absolutely determine in the early stages whether a given case of inflammation of the conjunctiva is due to the gonococcus, to morax diplo-bacillus or to Week's bacillus. Nor is this differential diagnosis an altogether unimportant matter. Take, for example, a case in which a patient comes with an acute conjunctivitis. You make a cover glass preparation and stain it with methylene blue, and find small diplococci, for the most part enclosed in the cellular elements of the discharge. If in addition to this you find that these micro-organisms decolour by Gram's method, there is the strongest proof that you are dealing with a case of acute purulent ophthalmia of gonorrhœal origin, and therefore with

a patient who will require all skill and attention if a favourable determination of his malady is to be obtained. In the early stages ordinary clinical observation entirely fails to differentiate between these various forms of acute ophthalmia. It can only be done by bacteriological observation, and hence the importance that it should be resorted to at the earliest possible moment.

2. In the next place I wish to make some remarks as to the necessity of bacteriological investigations of the conjunctiva prior to operative procedure. Nothing can be more distressing to a surgeon, who has used every care, than to find a case operated on with proper precautions going wrong. I have no doubt whatever that disaster can often be prevented by a thorough bacteriological investigation before attempting to operate. We are given abundance of directions as to how to prepare patients, what sort of a diet they are to have, what medicine is to be given them the night before. Full and explicit directions are sometimes given, even as to the special form of knife to be used, as if that in the hands of a good operator were a matter of much importance; and yet none of the text-books with which I am acquainted advise the operator to look before he leaps and to make bacteriological investigations before operating on any eye. Let me illustrate my meaning by a few concrete examples, and in the first place let me take some cases in which bacteriological examination showed the presence of streptococcus.

In my own experience I have known this parasite to cause the loss of three eyes after cataract extractions. About the year 1896 a patient was sent to me. One eye had already undergone the operation of cataract extraction, but the result had been an intense suppuration with destruction of the eyeball. She was sent to me to see if I would undertake the other eye. The first step was to have the conjunctival fluid from both eyes examined, and at once there came a report that the fluid on each side contained streptococcus. That was to my mind an ample and full explanation of this melancholy occurrence. With a good deal of difficulty the streptococcus was got rid of in the remaining eye, which was then operated on and good vision obtained. In the second case I had a suspicion that the lachrymal sac and conjunctiva was not altogether healthy. When the patient was admitted to the ward there was a certain amount of discharge. She was kept for a considerable time under what I believed in those days to be suitable treatment, till the house-surgeon informed me that the eyelids were perfectly free from all discharge, and the lens was then extracted. In that case there was a severe suppuration, and in the discharge streptococci were found. The third case is very instructive. A senile cataract in the right eye was extracted by a surgeon residing in another town. The night after the operation she was seized with violent pain in the eye, which ultimately became an atrophic stump. She happened to be admitted under my care to have the other eye done, and following my usual plan thorough investigations were made. It was then discovered that there were plenty of streptococci in the conjunctival fluid of the remaining eye. That afforded an ample explanation of

the disaster to the first eye and gave warning as to the treatment of the second. Had an operation been at once performed there is every probability that the second eye would also have been lost. A period of a fortnight passed before the condition of the conjunctiva warranted an operation. This was then done in the usual manner. For the first ten days the patient was absolutely free of all pain. At the end of that time, however, she complained one night of a good deal of pain, and on examining her next day I found the lids somewhat swollen and all other evidences of an acute catarrhal conjunctivitis present. On making a cover glass preparation it was observed that streptococci were abundant in the discharge. It was a streptococci conjunctivitis—a reinfection of the conjunctiva—probably from the nasal cavities. Fortunately the wound was firmly united, and the eye was beyond risk so far as vision was concerned. Take another example out of the many which I could give: At present there are in the hospital three children, who are all affected with similar injuries—a penetrating wound of the cornea, followed by traumatic cataract. One of these eyes is as quiet and free from irritation as in the most healthy condition. In this case there are no micro-organisms in the conjunctival fluid. Both of the others are extremely irritable, and in each there is an acute catarrhal condition of the conjunctiva. In the discharge from one of these cases pneumococci are abundant. In that of the other there are numerous specimens of the staphylococcus albus. The writer adds a further foot note to these cases. The eye which had the pneumococci subsequently developed a hypopyon with irido-cyclitis and had to be enucleated. The other made an excellent recovery.

To sum up this part of the subject: No operation which involves the opening of the ball should be undertaken if bacteriological investigations reveal the presence of staphylococcus aureas, streptococcus, pneumococcus, or any other well-defined pathogenic organism. As regards staphylococcus albus, my experience shows that it will not cause a suppuration or an iritis, or an irido-cyclitis, but at the same time if present in any considerable quantity it will almost invariably give a form of conjunctivitis, which, however, is of no importance as

regards the ultimate success of the operation.

3. Bacteriological investigations are of use as regards treatment.

In the cases of specific infections, such as those by Week's bacillus and the gonococcus, it is doubtful if any treatment actually shortens the disease while it may modify its virulence. But the diagnosis is here of first importance with a view to present contagion. With regard to the infections with the pyogenic germs, it is doubtful how far antiseptic lotions are of any value when applied to the conjunctiva.

Hydrotherapy and Physiologic Medication.

Under the charge of KATE C. WOODHULL, M.D.

HYDROTHERAPY FOR THE INSANE.

There is no class of patients in which the efficiency of the hydriatic method as a remedial agent is more markedly manifested than in the treatment of the insane. This view has in recent times received more attention and has apparently been more fully appreciated by those who have had the care of the insane in our large asylums than formerly, and at the present time a number of our largest asylums for the insane are making very extensive use of the bath in various forms in dealing with insane patients, especially in the treatment of acute mania.

The large hospital for the insane at Kalamazoo, Mich., under the able supervision of Dr. Edwards, was one of the first to make a trial of the hydriatic method. The results were so excellent that Dr. Edwards was able to state before a medical society that drug hypnotics had almost wholly gone out of use in the institution, and that careful examination of statistics showed that at the present time the number of doses of hypnotics administered

in a year was less than the number formerly administered in a month, with scarcely one-third as many patients.

While visiting the great institution at Kanakee, Ill., a year or two ago, the writer was informed by the able superintendent that hydrotherapy is rapidly gaining control in that establishment. A case was reported in which a woman was brought in suffering from acute mania. She had not been able to sleep for six weeks. She was so extremely violent that six nurses were required to control her. Hypnotics in immense doses failed to quiet her. At the suggestion of a colleague, the patient was placed in a neutral bath, 92 to 95 Fahrenheit. In fifteen minutes she was quiet, and required no future restraint. A repetition of the bath secured good sleep for the night. The administration of hypnotics was discontinued. The neutral bath and the wet sheet pack were found sufficient to secure rest and quiet. In three months the patient was discharged perfectly well. This case, said the Doctor, was the worst case

of mania ever brought into the institution.

A physician of large experience, and superintendent of an immense institution for the insane, remarked to the writer a few years ago: "We seldom use hypnotics since we have learned the value of water and have become familiar with its use. If a patient is disturbed we put on a wet rag somewhere, and straightway the patient goes to sleep." Of course it is important that the wet rag should be put on the right place and in the right way, at the right time and at the right temperature. Correct technique is absolutely essential to secure satisfactory results, but the necessary knowledge is easily acquired.

A very interesting account of the use of water in the great Manhattan State Hospital for the Insane, on Ward's Island, recently appeared in the *New York Herald*. Though reported from the standpoint of a newspaper reporter, the account is exceedingly interesting, and, on the whole, reasonably accurate. We quote as follows, hoping that the publicity given to this important method may lead other physicians, who have opportunity so to do, to make trial of the same methods:—

"Instead of the padded cell, the bath-tub; instead of the straight-jacket, the Scotch douche.

"This is a substitution that marks an epoch in the history of dealing with the insane. All preconceived notions of necessary restraint are swept away. The stigma attaching to insanity, lunacy and the like is destroyed. The person mentally diseased is no more to be reproached with it than the physically afflicted.

"This is the stand taken by the Manhattan State Hospital, West, on Ward's Island, in which there are about twenty-five hundred women patients. Dr. George G. Campbell says, 'Within a year or

two we will have the locks off every door and the bars from every window in this hospital; opiates are practically done away with, even sedatives, except of the mildest character, are not used. There are no mysterious implements for 'settling' the refractory patients, no evidences of oppression or punishment. The hospital is like any other used for other disease, except that it is brighter and cheerier than the average public hospital.'

"As soon as the patients have been placed on record, their first acquaintance with the hydrotherapeutic system, upon which the doctors base such hopes and confidence, begins.

"The patient is taken to the bathroom, laid on a marble slab and washed and shampooed in the most thorough manner. This is followed by massage, and then the patient is put to bed for 'observation.'

"A struggling, fighting, apparently irrepressible patient is taken by two attendants and placed in what looks to be an ordinary porcelain bath-tub, on which rests a raft-like frame. The patient is placed on this, and by a simple process the elastic strips of the frame are lowered until the raft becomes a cradle, in which the patient rests.

"At first there is much kicking and struggling and splashing, but the doctor at the marble table keeps his hand on the lever and his eye on the thermometer before him. The water in the tub is controlled by this lever, and is ordinarily maintained at a temperature of about 99 degrees. Soon the soothing effects of the warm water on the ends of agitated nerves begins to tell, and the patient becomes less violent, and finally lies perfectly calm and content. Soon the patient sleeps.

"The water is kept running continuously through the bath-tub, and always at the same temperature.

It comes up well over the patient's body as far as the neck, a sheet being drawn up to the neck.

"The length of time during which the patient is left in the tub depends on the character of the disease and the physical conditions. Sometimes the patient remains only a few hours, sometimes for days or even weeks. The longest time during which a patient is kept continuously in the tub is between three or four weeks. Day and night the patient swings contentedly in a cradle in the bath-tub, takes his meals there and sleeps there.

"Soon the patient has been transformed into a tractable, peaceful being on the road to rapid recovery. The skin is soft and shrivelled, but in a wholesome condition. When the patient is to be kept in the bath for a long time, however, oil is usually applied in order that the flesh may not become too much water soaked.

"This prolonged bath is considered by Dr. Campbell the most effective method of dealing with acute mania that has ever been employed. The most violent and the most stubborn cases seem alike to be answerable to it, and unlike the old method of using drugs or mechanical restraints, there are no ill effects to be overcome afterwards. On the contrary, it starts the patient in the direction of physical and mental health.

"Of course there are many conditions in which the full hot bath cannot be used advantageously. For these there are specialized baths which are equally effective in their way. The sitz-bath for cataleptics, and other forms of disturbance, is constantly in use; and the hot air cabinet, which is one of the important adjuncts of the hydrotherapeutic system, is substituted for drugs in relieving pain. It has been found quite as efficient, and there are no depressing after-results.

"Other accessories of the department are the rain bath, needle bath, warm and cold packs, and the Scotch douche. This last is one of the most forceful tonics that can be employed. It is regulated from the marble table, as are the various baths. The patient stands at a distance of about twelve feet, and the doctor, keeping one hand on the lever which controls the cold water, and the other on that which controls the hot water heated to a fixed temperature, turns on a stream of one and then the other. The thermometer in front of him enables him to gauge the temperature accurately, and there is an indicator, by means of which the force is measured. This can be varied so that the douche may be played gently or with force up to fifty pounds. This hot and cold stream in alternation strikes the back with a heavy impact, and as it is carried up and down the back, the spine glows from the friction, and the nerves and brain respond to the influence and resume their normal condition, or at least are greatly improved.

"Dr. Emmet C. Dent, superintendent of the hospital, says: 'I find that when water is properly applied in the form of packs and warm, full baths, it acts as a hypnotic and sedative, and is of great value when it is imprudent to administer drugs. As an eliminative it is of exceptional value. The application of water for its tonic effect in the form of sprays and douches under hydrostatic pressure, induces glandular action by its tonic effect on the general cutaneous circulation. Of course there is some risk of serious exhaustion in the warm packs and in the hot full baths, but a nurse who is skilled in the application of these baths can easily detect the danger signals and remove the patient before any serious consequences have resulted. We

meet more or less opposition to these baths on the part of some of these patients, but I find it is but seldom, if the patient is properly handled, that the baths cannot be given. If the patient is resisting and suspicious she is allowed to see the other patients receive their treatment, and in her own case the procedures are made as mild as possible. The most resisting and suspicious patient, after she has received one or two treatments, usually submits quietly and enjoys them.

"The greatest interest has been excited among the specialists in the line of mental diseases by this striking experiment at the Manhattan State Hospital, and in several institutions similar treatment is being given.

"Another experiment over which the authorities of the Manhattan State Hospital are enthusiastic is their out-door work, which is used during warm and mild weather. A similar system to that which is used nowadays for consumptives was introduced for the insane patients. Tents were erected on the lawn, and in these acute cases, with the most violent symptoms, were placed.

"There was no increase in the quota of nurses, four being assigned to each tent containing twenty-five patients, and no more difficulty was experienced in managing them than in an ordinary ward. Indeed they seem more amenable to treatment. That is one of the reasons on which Dr. Campbell bases his opinion that bars and bolts are not only unnecessary but injurious. Anything that arouses the spirit of resistance ought to be done away with, he asserts.

"In the tents, in the open air under the open sky the patients

slept contentedly by night and enjoyed the out-door freedom by day. The tubs and sprays were set up in one of the tent dormitories and were used as freely as in the permanent hospital building. For five months this out-door life was maintained as simply and with as little difficulty as if it were another kind of hospital, the first time such a thing had been thought of as a possibility in dealing with acute mania. Many of the worst cases were taken directly from the reception ward to the tents. The percentage of recoveries was unusually large.

"If a patient wants to howl she is given a room in which to keep it up until the probable duration of her howling is determined. No ban is placed upon her, but she is likely to find herself in a tub as soon as a satisfactory diagnosis is reached, and before long will be lulled into forgetfulness of her desire to howl. She would not forget it if she were directly prohibited to indulge in that pastime.

"In line with the out-door life for the insane is the provision for them of various kinds of athletics. Even those patients belonging to the acute class share in these privileges. In fact, those who are not too much excited by it not only do better in the exercise but are more greatly benefited by such exercise. Tennis was the favorite game of the summer, and during the fall months basket ball came into favor. The teams wore simply athletic costumes, and there was many a rough and tumble scrimmage between the rival elevens, with no more serious results, mentally or nervously, than often succeed a game of basket ball between rival college girls." — J. H. KELLOGG, M.D., *Modern Medicine*, January, 1904.

Medical Progress.

The Editor.

DIALYTIC MEDICATION IN GASTRIC AFFECTIONS.

Prof. Hayem employs five different saline solutions in the treatment of gastro-intestinal affections. The special indications for each are as follows :—

No. 1.	Bicarbonate of soda	2 grms.	50
	Sulphate of sodium	3 grms.	
	Chloride of sodium	1 gm.	
	Distilled water	- 1 litre.	
No. 2.	Chloride of sodium	- 5 grms.	
	Sulphate of sodium	2 grms.	
	Distilled water	- 1 litre.	
No. 3.	Chloride of sodium	5 grms.	
	Phosphate of sodium.	3 grms.	
	Distilled water	- 1 litre.	
No. 4.	Chloride of sodium	3 grms.	
	Sulphate of sodium	5 grms.	
	Distilled water	- 1 litre.	
No. 5.	Chloride of sodium	5 grms.	
	Sulphate of sodium	- 10 grms.	
	Distilled water	- 1 litre.	

The solution, No. 1, which resembles Carlsbad water, and solution No. 5, are both used in parenchymatous gastritis with hypopepsia. The desired quantity heated to 40° C., near blood heat, is taken in three doses, in the morning fasting, at intervals of twenty minutes.

The first day 250 C. C. is administered; this is increased each day by 50 C. C. until 500 C. C. is reached. The patient eats his first meal twenty minutes after taking the last dose. The treatment should last twenty to thirty days. Contra indications :—Atonic dilatation, tuberculosis, non-compensatory affections of the heart, and especially cancer. Solution No. 2 is taken cold, on an empty stomach, one hour before the first meal, the dose being 200-250 C. C.

Duration of the treatment is five weeks. This solution is serviceable

in a number of conditions: slight hypopepsia, excess of pepsin with feeble secretion, and especially in the obscure forms of hyperpepsia where the symptoms are masked by the irritation caused by drugs.

This solution should be used at the start, in almost all gastro-intestinal affections.

The only contra indication is hyperpepsia with slow digestion.

Solution No. 3 is indicated in cases of great debility, where there is a well-marked deficiency or even a total absence of pepsine.

Solutions No. 4 and No. 5 have a preponderating action on the intestines. They are prescribed in the same manner as the preceding solutions: cold or warmed to 40° C., about half a pint at a dose.

Solution No. 4 is especially useful for cases of chronic constipation, with or without attacks of muco-membranous colitis, and for patients with enlarged liver.

Solution No. 5 (formula of Hayem's serum) has a well-characterized purgative action, which is most effective when the digestive tract has been previously cleansed by means of intestinal lavage (25 to 30 grammes of *sodium chloride* to a litre of water). The purgative effect of solution No. 5 is explained by its high freezing point (0.435), which retards absorption and draws a certain amount of fluid into the intestines.

Dialytic therapy recommended by Prof. Hayem is, to a certain extent, an imitation of the thermal cure treatment of Carlsbad, Marienbad, Chatel Guyon and Miers.

Used with discernment it will prove very beneficial in the treatment of chronic gastro-intestinal affections.—*International Therapeutics*.

THE LIMITATIONS OF THE VALUE
OF NITROGLYCERIN AS A THER-
APEUTIC AGENT.

Loomis writes on this subject in the *Medical Record* of March 18, 1905. As a result of these clinical and laboratory observations he offers the following conclusions:—

1. The usual dose of *nitroglycerin* (1-100 grain) is too small to produce any effect in pathological conditions: 1-50 grain is a minimum dose.

2. It is a perfectly safe drug to use. Even in the large and repeated doses used no ill effects have been noticed.

3. High arterial pressure in man is not perceptibly affected by it, nor is dilatation of the blood-vessels apparent.

4. Its effects are very transient, as shown by the experiments on dogs, and the ordinary dose of 1-100 grain every four hours could not possibly have any effect on the arteries.

5. *Nitroglycerin* is said to increase the quantity of urine in chronic Bright's disease, but after keeping accurate records of the

daily amount of urine passed, the writer was never able to satisfy himself that any increase seen was due to this drug.

6. He believes that in conditions due to arterial spasm so called, such as angina pectoris, migraine, and asthma, *nitroglycerin* may be of benefit, in full doses often repeated, but not in arterial sclerosis, where the arteries themselves are more or less changed.

Before closing he mentions a drug which in his experience has given most satisfactory results in relaxing the arteries and diminishing blood-pressure in arterial sclerosis. He refers to *chloral hydrate*, given in five-grain doses every four hours night and day. The effects are extraordinarily uniform. The sphygmomanometer will generally show a marked fall of pressure in twenty-four hours, and the distressing symptom of headache will generally be controlled. At the New York Hospital during his service, as well as that of his colleagues, Dr. Peabody and Dr. Lambert, *nitroglycerin* has been entirely discarded in arterial sclerosis, and *chloral hydrate* has taken its place. —*Therapeutic Progress.*

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Editorial.

A GREAT NEED.

This is the hot season, and the readers of the JOURNAL who are rustivating, as well as those who are not, must not expect too much of the Editor who, in spite of the season, has to keep his own work going while trying to follow out St. Paul's injunction and be all things to all men ; in other words, a "t'i-kong" (many of you have had experience in that line).

Most of us who have been in China long enough know what a hot season means, and this one is no idle name. Fortunately it has been a very healthy one in this neighbourhood, which is a blessing in itself.

The health bulletins in Shanghai show remarkably few contagious or infectious diseases about, if we except tuberculosis which, like the poor, is always with us.

In the recent cases of sudden death of two men who lived together the inquest was unable to decide with certainty upon the cause of death, but in view of the thoroughness of the investigation a diagnosis by exclusion would point toward ptomaine poisoning as the most probable cause.

The number of sudden deaths which occur in this rapidly-growing metropolis of the Far East give the civil surgeons plenty of autopsy work, of which his brother, working exclusively among the Chinese, feels the need. How often—when obscure cases are brought into our wards to die on our hands—do we long for an interview with the deceased through the interpreting power of the scalpel, only to be thwarted by the impassable barrier of custom. We groan in the spirit and out of it, and wonder how long.

One of our best-known sinologues has said that the two greatest needs of China are Conscience and Character ; the editor, in all humility, wishes to add a third—Autopsies.

HOSPITAL REPORTS.

The Editor is going to be bold enough, perhaps at the risk of his reputation as a missionary, to criticise the average hospital report that comes in to the JOURNAL, and to suggest some changes.

In doing so he recognizes the fact that these reports are intended largely for home distribution among a lay public, which is more interested in the spiritual than in the medical or surgical welfare of the patient, or in the progress of a new building or a new worker than in new methods.

Many of them make excellent reading as Sunday School tracts, but as hospital reports—never! Now he is not depreciating the use of the former, but only making a plea for the latter.

If they are to be of any use to us here on the field, and he maintains that they ought, they should contain a few reports of interesting cases, a monograph or two, if the spirit moves, on some special line of work dear to the heart of the writer, or perhaps some discussion of useful designs of buildings or apparatus, or the exploiting of any remedy or method of treatment, new or old, that has been found particularly helpful.

You may say that we get all this sort of thing in the JOURNAL, and that is the place for it. Yes, but we do not get anywhere near enough for our needs. Has it ever occurred to you that those reports might have a decided value in influencing young men toward the medical mission field, and in their present form, unless one had some knowledge of the men in the field he would certainly be inclined to look on the medical missionary as a good man who might be doing some good work, but, aside from a few figures, had very little to show for it?

Among the numerous reports that have come in since the first of the year that of the Tung-kun Medical Missionary Hospitals, of the Rhenish Missionary Society, seems to be the most thoroughly suitable. It is very brief, but at the same time neglects neither side of the work. It is published *in toto* in the Hospital Reports, with the exception of the statistics, which only lack of space prevents our printing, as they are a model of thoroughness and style.

The photographs of the new building and ward are very attractive, and the whole report is one which would inspire

interest and confidence in those at home. The Rhenish Mission is certainly to be congratulated on its medical work as well as the way in which it is being done.

THE CUSTOMS MEDICAL REPORTS.

The JOURNAL acknowledges the receipt of the annual medical reports of the Imperial Maritime Customs for the year ending March 31st, 1904.

Most of the reports are more or less stereotyped, but two articles by Doctor Georges Barbézieux, the port physician at Mengtsz, way down in Southern Yunnan, are of more than usual interest. One is on the sanitary conditions of the place and the other a very interesting monograph on leprosy, in which the Doctor, after a study of some 150 cases, concludes that the disease is acquired in some way (he does not claim to say how) through the exposure incident to the cultivation of rice. He admits that a predisposing disposition exists, as in other diatheses. He believes the germ to be present in the atmosphere and soil where rice is extensively cultivated. How to account for it in non-rice-growing regions he does not state. The theory of infection through the eating of stale fish cannot hold in this region. He regards heredity as a non-important factor, and the contagion as very slight if any.

While Doctor Barbézieux is very interesting, his present data are hardly large enough from which to form any very reliable conclusions, and our knowledge of the subject is left very much the same as it was before.

However, it is this sort of observation and work that has accomplished things in the past and will in the future, and we congratulate the Doctor on his monograph which shows investigation and thought.

WELCOME.

This month Dr. W. H. Jefferys, who has been co-editor of the JOURNAL since January, 1903, returns from America with his family, where they went in search of health in July, 1904. While at home Dr. Jefferys has been active in the interest of medical missions.

The Editor feels that he only voices the sentiment of the Association and other readers of the JOURNAL, in saying that we shall heartily welcome Dr. Jefferys again, not only for himself but because of his whole-souled interest and valuable aid in the conduct of the JOURNAL; and congratulate the Mission on regaining such a thorough and enthusiastic worker in his chosen field.

FINANCES.

It may be a comfort to those who really take a lively interest in the JOURNAL, as well as some of those who do not, to know that the JOURNAL, in spite of the handicap under which it works (before mentioned), is in good financial condition, having a semi-annual balance of \$467.99, but as the financial statement is not due until the January number we will spare you the incriminating figures. The Publication Committee is also waxing fat, as it also had a balance on June 30th of \$883.01, which has received substantial addition from subscriptions since. The receipts, as published in the JOURNAL, have only been those received from the members and friends of the work. \$250 has also come in from the sales of Dr. Cousland's translation of Kirke's Physiology, which was the first book purchased and published by the Committee after the general meeting in February last.

PUBLICATION FUND.

Previously reported	...	...	...	...	\$1,099.41
Dr. E. A. Layton (Nanking Christian Hospital)	...				20.00
„ J. R. Watson, Ching-chow-fu	...	...			10.00
„ J. F. MacPhern (\$20.00 Hongkong)	...	...			19.33
„ W. E. Plummer, Wenchow	...	...			20.00
„ Samuel Cochran, Hwai-yuen	...	...			15.00
Mr. C. J. Neal, Harrisburg, Pa. (\$50.00 gold)	...				104.32
„ Li Kien-ren, Lu-chow-fu	...	...			20.00
„ Lui Ai-ting, „	...	...			1.00
„ Yang Yueh-po, „	...	...			1.00
Rev. James B. Cochran, Hwai-yuen	...	...			10.00
„ J. E. Brown...	...	...			5.00
Miss Alma Favors	...	...			5.00
„ Strow, Foochow	...	...			3.00

\$1,333.06

Hospital Reports.

The work of the year 1904 has been carried on as was foreshadowed

Tung-kun Medical Missionary Hospitals, Rhenish Mission. in our report of the previous year. After

the Chinese New Year, male patients were admitted to the new hospital, and were there under the care of Dr. G. Olpp; while women, children, and cases of vesical calculus in men were treated by Dr. J. E. Kuhne in the old building, where also paying patients were seen and the polyclinic was conducted, the two medical missionaries sharing this latter part of the work.

23,826 visits were registered at the polyclinic; and 660 patients were treated in the two hospitals. Of the 660 in-patients 198 were female and 462 male, and the average time of residence was twenty-three days.

The upstairs ward in the old hospital we had intended to keep free for male stone cases, but it was found necessary to use it for women and children, and a mat shed was erected for the male patients. This, however, was pulled down at the close of the year, as all male patients are now, without exception, being treated in the new building.

REPORT OF DR. J. E. KUHNE.

Twenty-five men and children have been operated on for stone in the bladder—nine suprapubically, a girl by dilating the urethra, and the remainder by the median operation. The only one who did not recover was an ill-tempered old man, who on the fourth day after the operation, refusing to listen to the warnings of his attendant, took off his dressing, went down the steep

staircase of our mat shed, and had a walk. When I scolded him at my next visit, he gave as his excuse that he felt quite well and able to walk. His temperature, which was normal, began to rise, a persistent hiccough set in and prevented him from taking food, and eleven days after the operation he was removed from the hospital to his own home by his sons.

An abscess of the spleen occurred in a girl of seventeen years of age, who had been ill for about twenty days, but had had no symptoms of an acute character. An exploratory incision was made, and pus being found, was at once evacuated and a drainage tube inserted. The patient recovered rapidly, and the spleen, which had reached nearly to the umbilicus, gradually diminished in size.

The linear extraction for cataract was performed thirteen times—nine on the right eye, with restoration of sight, and four on the left eye, of which only two gave satisfactory results.

Cases of burns that come under our care immediately, and before the application of such Chinese remedies as rotten oranges or other things still more filthy, did well under the soda sublimate treatment. In some cases no change of dressings was required.

A woman of fifty years of age was operated on for ovarian cyst on the 18th of May, and made a rapid recovery. Dr. Olpp assisted me at the operation. The pedicle having been sutured, a drainage tube was inserted, and was left in till the fourth day, when the dressings were found almost dry. She was dressed for the first day on the evening of the second day. Her

temperature was then 38.3 C., but gradually came down and remained normal after the fifth day. The cyst wall weighed one and a quarter pounds and the contents twenty-three and a half pounds.

A boy and a girl died in the wards; the boy of septic tubercular meningitis, the girl of an extensive burn; death occurring thirty-three hours after admission.

Ng Tsing Lin Ng-ku, whose services added the sum of \$119.65 to the hospital funds, was called to attend twenty-eight cases of labor. In only one of these was the labor normal; the mother, a daughter-in-law of the mandarin, giving birth to healthy twin sons; in three cases the child was born before her arrival. Brief details may be given of the other cases: One woman was dying when she entered the house; six times she had to remove a retained placenta; twice to perform podalic version, saving the mother in one case; four times she used forceps, saving the mother and child; twice she treated eclampsia, saving one of the mothers; in the following seven cases the mother recovered, but the child was in most cases already dead before she was summoned: two cases of breech presentation, one forceps case, one cephalotripsy, two hydrocephalus, and one of hands over head preventing delivery. A case of septicæmia, in which the child had been dead for a fortnight, was operated on in the hospital. The gangrenous mass was removed, but the mother did not rally. The remaining case was one of false pains.

Vaccinations.—Twenty-four children were vaccinated, all with good results. We made 130 insertions and obtained ninety-six pustules.

Next year the clerical missionary residing at Tung-kun will have charge of the evangelistic work in both hospitals, the evangelists and

Bible-woman working under his supervision and direction; and he will in future reports deal specially with this side of the work of the medical mission.

It is with much pleasure that we place on record the fact that Cheung Kan-kwong (Tsung Tin), one of our former students, and now acting as a medical assistant in the hospital, successfully passed the provincial examinations at Canton, and has obtained the degree of Sau Tsoi. Lei Po-shang and Lei Yün-heung, also former students, are still working as assistants; the former in the new, the latter in the old hospital.

REPORT OF DR. G. OLPP.

We opened our new hospital on the 23rd of March. A great many people witnessed the opening ceremonies, and among the guests were both the civil and military mandarins.

Some changes have been made in our arrangements for the reception of patients, and have been carefully carried into effect under the supervision of Mr. Baumann. All patients are now, on admission, bathed and dressed in hospital clothing, and a registration fee of fifty cents is now charged instead of the former admission rate of twenty cents. Formerly only eye cases were required to board in the hospital, others being permitted to cook their own food in the kitchen; now all cases, without exception, are provided with food by the hospital at a daily rate of fourteen cents for the two meals.

One of our three attendants goes regularly to the old hospital, assists there at the polyclinic, and then brings back with him any who may have been admitted as in-patients. The two others, Ah Ling, mentioned in our last report, and A Tai, an orphan and a former

patient, have faithfully discharged their duties, and are being instructed in the work of male nursing by our European assistant.

Our own house being ready, we were able to entertain a party of European friends who came from Hongkong and Canton to see our work. Dr. Krüger, the German Consul, and Mrs. Krüger, were among our guests. On the Sunday morning during their visit divine service was conducted by the Rev. Th. Kriele, of Hongkong.

On the 24th of July we were suddenly called upon to find accommodation for thirteen soldiers who had been wounded by robbers in Man-king-sha, near the Bocca Tigris. Forty of the robbers had fallen. Only one of the thirteen was an opium smoker, and this contrary to the order of his commandant. All recovered; twelve being discharged after some six weeks in the ward, the last making a slower convalescence owing to the chest wound resulting in pyopneumothorax. We received a cordial letter of thanks from the commandant, Chung Tsz-tsoi.

A man from Corea, a victim of the opium habit, was brought in to the hospital in an almost comatose condition. He had been smoking forty cents worth of opium daily, but falling ill was now unable to roll over the opium lamp the little balls of the drug. The proprietor of the inn in which he had been living, fearing that he was about to die, had him carried to the hospital. His case was a somewhat troublesome one to our attendants, as he required a great deal of special nursing, but we and they were rewarded by seeing him gradually recover consciousness and health and eventually he got rid also of his craving for opium.

Among other cases of interest, the following may be mentioned: a teacher, who had both the great

tendons of the leg (*tendo achillis*) cut by robbers, and who left the hospital able to walk; a man who came in for the amputation of a giant great toe measuring 11 cm.; a rich man, who having been shot, came to us for the removal of the bullet. It had entered between the shoulder blades, passed through the chest, and was extracted from the front wall of the thorax. A few days later a piece of cloth which had been carried through the chest by the bullet came away from the wound; but fortunately no lung complications occurred, and the man made a good recovery.

The rent of the rooms has been increased from \$2.50 to \$10. In July two teachers of the new government school occupied one of these rooms. After their discharge we visited them in their school and found them imitating closely European methods, both in the matter of their teaching and in the school arrangements. The pupils, seated on modern school forms, were being taught English and mathematics, and were writing with slate and pencil. A bell gives the signal for the beginning and end of each lesson. On Sunday the pupils are free, not, as one might suppose, that they may keep the Sabbath, but in order to imitate the schools of the West.

We generally give warning to friends of patients when cases are not going satisfactorily, and no deaths occurred in the hospital.

In the month of October we were summoned urgently to Li-long, where the missionaries of the Swiss Basel Mission have their seminary. We found an epidemic of typhoid fever had broken out, and six of the cases died.

The evangelistic work was from the opening of the hospital under the care of the Rev. Diehl, who alternately with his assistant gave a daily address to the patients. To

him, to Rev. Maus, who spoke at the opening ceremony, to Rev. Gottschalk who, for a while in Tung-kun recruiting his health, said many kind words to our inmates, our best thanks are here expressed. The young people among the in-patients have been taught the Christian Trimetrical Classic. The evangelist Wong Shiu-tün, who is to devote his whole time in future to the new hospital, was introduced to his new work in December. He will conduct morning and evening worship with the hospital staff.

A Christmas tree was prepared for the patients, and cheery addresses appropriate to the Christmas season were given by Revs. Bettin, Diehl, and Maus.

We thank God for having helped us hitherto; and we beg that our many generous friends will continue their prayer to God that His blessing may increasingly rest upon our work.

Dr. McCartney and his work are too well known to need any introduction to the readers of the

Chungking General Hospital for Men.

JOURNAL, but we wish we could reproduce the 14th annual report of the Chungking General Hospital for men. It contains some interesting illustration of the interior of the hospital, a general view of which appeared in the JOURNAL of January, 1904.

The year 1904 closed with substantial gain over previous years in every respect. The new hospital is proving more its adaptability to the use that is made of it. It has been a great pleasure the past year to have been able to endure the strain of the work the entire 365 days, and we trust that the time may never come when we will be

compelled to close the hospital even for one day for lack of proper supervision. With our added facilities for private patients the number of such patients at a good paying price has been considerably more than for previous years. More than 600 men have received treatment with a total of over 16,000 days during the year, while over 200 women have been cared for by the Women's Hospital during the same time, a total of over 800. The receipts at the hospital entrance have amounted to more than 1,200,000 copper cash during the year. The plan of seeing patients out of regular dispensary hours has met with general favor by the better class of people, and the receipts have amounted to nearly or quite as much as those received at the dispensary.

The new dispensary which was begun in 1903 was completed and occupied in June. The building is located on the corner of a busy thoroughfare in close proximity to the hospital. It is built of grey brick with sandstone trimmings, two storeys high. The ground floor contains a large reading room or street chapel, which will accommodate over 100 people, a consulting room, dressing and dispensing room. The second floor contains three rooms, one of which is used for a laboratory. This building was erected through the kindness of Dr. J. M. Segur and his wife, of Detroit, Mich., in memory of their sister and little son, and is known as the Carolyn Thomas and Charles Segur Memorial. Mr. James Murray, of the Bible Society of Scotland, has, at his own expense, stationed a man here, who sells books and preaches to the patients while they are waiting to be seen. His sales have averaged over 2,000 cash a month, and he has preached to many thousands of patients and their friends. During the year a

new dispensary has been erected and opened in Kiang-peh in connection with our street chapel. It consists of only a consulting and drug room, but is much more satisfactory than the old building. We have seen patients in the Si-pan-ki dispensary every day in the forenoon from ten till half-past twelve, and Kiang-peh twice a week in the afternoons for about eight months in the year. There has been a substantial increase in the number of out-patients which has for the first time been for men only. Over 12,000, to which if we add the number of women seen by Dr. Edmonds, there would be a total of over 18,000 visits.

EVANGELISTIC WORK.

The past year has been the first year in the history of the medical work in Chungking where one man has been set apart entirely for evangelistic work. The wisdom of this action has been proven by the increased interest manifest on the part of the patients. A half hour's service is held each morning in the hospital chapel for the hospital attendants and those patients who can be about. These meetings are usually attended by 15 or 20 people. One preaching service has been held each Sunday in the hospital chapel as well as on three week nights. Mr. Lo has been faithful in his bedside instruction. A large number have systematically studied the catechism and not a few have manifested an interest in the truth.

Itinerating. — No itinerations have been made, because we have had no one competent to leave in charge of the work. We hope that with the new reinforcements promised that we will be able to do more itinerating in the next few years than we have done in the past.

Medical Students.—Our experience along these lines have been similar to many elsewhere in China, viz., as soon as the young man becomes properly trained he finds some excuse for leaving. I do not altogether blame them for this, but in the majority of cases when removed from under the influence of the foreigner they rapidly follow after the customs of the native doctors, and do not seem to have any higher aim than that of making money, and it matters not whether it is after the manner of the foreign teaching or not. The temptations to young men who live in the hospital are greater than the most of them, I have found, are able to bear. I have come to the conclusion that the only way in which to give a Chinaman a medical education is in properly organized medical schools, where he has to pay for all he receives. I have my doubts that even this way would be entirely successful until China recognizes Western medical teaching and has laws regulating the same. What is there to prevent one of these men from leaving these medical schools at the end of one or two years and practicing medicine with the recommendation that he has studied Western medicine?

The American Dispensary.—The American Dispensary has sold over Tls. 8,000 worth of medicines and supplies during the year, and is yearly meeting with more favor. The invoices at the beginning of the year showed a stock of over Tls. 10,000 which, with building and fixtures, would mean another 2,500 or 3,000 taels. We have installed an aerated water plant during the year, and we hope to meet the growing demands on the part of foreigners and natives for such drinks at reasonable prices.

Our Patrons.—We desire to thank those who have helped us in

a financial way during the year, and trust that we may merit their favors in the future. The largest single subscription was from Dr. and Mrs. J. M. Segur, which was for \$500, used for the completion of the new dispensary. The endowment of a bed by Rev. T. W. Lane, Cleveland, Ohio, to be known as the Helen Lane Bed. The Chungking community, as has been their custom, generously supported the work, and we wish here to record our thanks for their many kind favors and the interest they have taken in the work. The Chinese donations have been about as usual, with a growing inclination on the part of the wealthier Chinese to become yearly subscribers to the work.

Improvements made and contemplated.—We have purchased a piece of property outside of the city wall adjoining the hospital and facing the street; one hundred or more feet below the hospital, on which we expect to erect a reservoir of sewerage from the hospital above. We hope in this way to get rid of this one of the *greatest nuisances of China*. It will require \$150 to put it in proper shape. We also desire to put in a water-pumping and electrical plant, which will cost in the neighborhood of \$1,000. We trust that some of our friends in the home land, who are interested in the success of the hospital, will supply this need.

No report of the work done in this institution would be complete without a proper acknowledgment of the able assistance and consolation of Dr. Agnes M. Edmonds, of the William Gamble Hospital, and Dr. Thomas Kirkwood, of the London Mission Hospital, as well as Surgeon Wm. Bastian, of H. B. M. gunboat *Woodcock*, and Surgeon Forest, of H. B. M. gunboat *Woodlark* in this port.

There is so much in the report of Doctor Flemming that is thoroughly characteristic of the trials and triumphs of medical work in China, which the great world in the home land can never understand or sympathize with as we can, that it is a pleasure to hand it on to the readers of the JOURNAL, assured that it will find a responsive chord in the life of many an old and young worker.

A summary of the women's medical work in I-chow-fu since 1896, when the last joint report was published, shows sad interruptions. Dr. Anna Larson, after five years of faithful and efficient service, was called to her reward, laying down the burden of life to receive the crown of glory on Christmas Day, 1897, during the absence of Dr. Johnson on home furlough.

Her successor, the undersigned, reached I-chow-fu in October of 1898, "speechless," "helpless." The doors of the women's dispensary had long been closed, the students and helpers scattered; there was no native interpreter, nor trained woman, and it was deemed neither wise nor practicable for me to attempt medical work; the women being largely cared for by the native physician at the men's dispensary.

The instruments and medicines were in bad condition, as may be imagined, having passed through a rainy season without special care; these required attention; a small foreign company to keep well, and an occasional consultation with the native doctor, kept me from forgetting my calling, although the study of Chinese filled my time.

Dr. Johnson's return in the spring of 1899 relieved me from twinges of conscience in regard to not treating patients until I had gotten, at

least a start, on the language; he found it more convenient to see the women in separate quarters, so the long-closed doors were re-opened and regular dispensary work was again carried on among the women.

In October of 1899 a new foreign residence rendered vacant some native buildings adjacent to the women's dispensary; they were placed at my disposal for hospital use, and thus a beginning was made. A small operating room was fitted up and wards to accommodate about fifteen patients. This place continued to be used until July, 1904, when the permanent plant purchased in 1903 was available. Here again it was necessary to occupy native buildings; although somewhat better than those left, they are being replaced by new brick structures as fast as possible, the most insanitary being torn down first. A new wall, gate-house, dispensary and drug room, operating room and three wards are almost ready for use. It is hoped the near future may bring funds to erect the other wards planned for and needed.

In January, 1900, I felt the time had come when I should undertake my share in the work, and very glad have I since been for those six months of privilege before the Boxer outbreak in June of that fateful year, when all work was stopped.

As a result of drought the previous year thousands of beggars thronged our streets, and suffering was everywhere rife. Nearly four thousand received medicine at the dispensary, many visits were made in the homes and thirty were treated in the hospital. My mornings were still devoted to language study as far as possible, but my time was badly broken up, proving how impossible it would have been to study had I begun medical work too soon.

While we gratefully record that no untoward event marked our

flight as we left our station, it was evident later that a Divine guidance had led us out none too soon, for on Sunday, July 1st, two days after our departure, "patriotic" soldiers entered I-chow-fu, looting and damaging the foreign houses.

Tsingtao furnished me a shelter that summer; later Cbefoo, where my time was spent principally in study. After passing my examinations I read some medical books in Chinese, hoping to thus keep from forgetting. The summer of 1901 was spent in Korea and Japan, seeing the work there in many places and receiving much inspiration and help from the trip. In the fall I was invited to Soochow to assist in the Tooker Memorial Hospital, thus leaving Dr. Mary Fitch, who had just reached the field, free to study. My winter was both pleasant and profitable; Soochow friends made me forget I was a stranger.

Early in March, 1902, after twenty months' absence, the ladies were finally allowed to return to I-chow-fu; although the dispensary had not been robbed, my home had, and many things were not in evidence when wanted.

March 25th was opening day, but three patients came, and for many days attendance was light, and we could feel a change in the attitude of the people. In April the first patients came to the hospital, and gradually we regained the confidence and friendship of the people, shown by increased attendance at the dispensary and a greater willingness to listen to the Gospel message.

While the claim of many that medical work is justified from the standpoint of humanitarianism is true, nevertheless we feel here it is the handmaid of truth breaking down superstition and having no small part in the evangelizing of this vast country. An earnest effort

is made to give the Gospel message to all who come. Mrs. Johnson has devoted much time to visiting patients in the hospital wards and to talking with the women waiting for treatment in the dispensary. For two years the Christian women have undertaken, for the love of Christ, to visit the dispensary daily, bringing the message of grace that saves to their suffering sisters; they have appointed days—two each day. A Bible-woman and my assistants also do personal work. Much seed has been sown and some has fallen on good ground. I personally conduct the morning prayers for the assistants, and all patients able to attend are expected to be present.

Among the many blessings I have enjoyed during these six years my perfect health stands preëminent, giving zest to other pleasures. A new home, convenient and pleasantly situated, has added greatly to my comfort during the past half year, and last but not least, the new medical plant almost fills my cup. This site is very conveniently located, uniting the compound compactly, and had formerly been leased for chapel and dwelling purposes; the high price asked preventing purchase. On this account I desired much to get another location outside the suburb, where I could have a free hand, but the mission meeting of 1902 greatly discouraged that idea and strongly advised this as safer and more convenient and central; the annual rent for the unexpired lease covering cost of purchase. An expensive outside wall was also necessary. I speak of these facts more particularly that the kind friends who have contributed to this purchase money may understand why more buildings have not been erected and why the new buildings seemed to go up so slowly. The old buildings, poor as they are, were all in use, and readjustments were not easy; we

were really pushing as fast as the exigencies of the situation and the slowness of the laborers allowed. The wisdom manifested in selecting this location has already been apparent; and to one living alone, as may often happen, there are friends within call should danger or illness come suddenly.

The funds for the new plant were the gifts of many friends in St. Louis and the South-west Territory, solicited by the ladies of the South-west Board of Foreign Missions; and special thanks are due to all who had a part in this good work; their money has been put at compound interest in a bank which never fails to pay it the coin current in heaven. The sick and suffering who enjoy these nice rooms will thank them for years to come, and we hope heart sick and soul hungry may receive a blessing from abiding in our midst. A glimpse into most of the homes makes one wonder how any can be well; it is truly the survival of the fittest. I have related none of the interesting cases, nor told the sad stories at this time, but if anyone knows the people, the doctor ought to, as she meets all ranks and conditions. My work has been chiefly with the poor and humble. It is a wonderful work, and needs the best talent of our church, hearts that are courageous and hands that are willing, souls that are on fire with the love of Christ, working that all may obtain the healing of the Great Physician free for all.

STATISTICS.

	1902.	1903.	1904.
Patients treated in dispensary, new	1,593	2,236	2,585
Patients treated in dispensary, returns.....	1,147	1,682	1,805
Patients treated in the country	260	11	11
" " " hospital....	76	85	138
" " " homes	47	64	53
Average days of patients in hospital	13	14	14
Total receipts (in large cash) from field, being the sum of gifts and gate receipts*	34 000	82,092	93,894

* The sum of twenty large cash is received at the gate of the women's dispensary from all able to pay.

The last printed report of the medical work in connection with the American Presbyterian Mission at I-chow-fu.

I-chow-fu, Shantung Province, China, was for the years 1896 and 1897, and was issued just after the death of Dr. Anna Larson and while Dr. Johnson was at home on furlough.

During the year 1898, although the work was in charge of a Chinese assistant, the number of patients fell off only a little over two thousand. This falling off was principally among the women, who would naturally come less freely to the men's dispensary, especially with no foreigner in charge.

During 1899 the work was still carried on under one management, although Dr. Johnson's return for the spring placed a foreign physician in charge for most of the year. There was an increase in the attendance this year, although the total did not equal that of 1897.

The year 1900 began very auspiciously. The men's and women's dispensaries were again separate and both under foreign supervision. Patients were coming in increasing numbers, and the year bade fair to be an exceptionally busy one.

A class of fifteen young men began a four years' course in the study of medicine. Of these three were dispensary helpers, but the other twelve paid all their own expenses; the Mission giving them only their tuition and room in which to live.

In June, however, came the Boxer outbreak. The foreigners all left the station, and no more medical work was done that year.

When Mr. Faris and Dr. Johnson returned in May, 1901, the men's dispensary was immediately opened and continued open during the year—part of the time under foreign and part of the time under native supervision. The attendance was

very fair, although of course not nearly equal to that of the year before. It was deemed advisable not to open the hospital at all this year.

The spring of 1902 saw the work again opening in regular order. The ladies of the station returned. The men's and women's dispensaries and hospitals were opened, and each again in charge of a foreign physician.

In common with all forms of missionary effort the medical work here suffered severely from the Boxer uprising. Although the damage done to property was insignificant the alienation of the people and their shaken confidence in the foreigner and his methods operated very strongly against the success of the work. At the men's dispensary and hospital the attendance for the *ten* months of 1902 was but eight thousand eight hundred as compared with six thousand for *five* months in 1900. Gradually, however, the feeling became better, fears vanished, confidence was restored, and this last year (1904) finds the record over thirteen thousand, a little higher than it was before the outbreak.

The tabulated statement of the attendances at both dispensaries for the past fourteen years shows that during this time there have been a total of over one hundred seventy-five thousand attendances. Of these about one hundred thousand were first visits, and as it is safe to estimate that one-half as many more came who were not patients. We have one hundred and fifty thousand persons who have in this way come in contact with the foreigner, and who have listened at least once to the preaching of the Gospel.

In these records the dispensary patients are strictly out-patients. The treatments given the in-patients, although they may sometimes go

to the dispensary for them, are not counted in the dispensary records. A patient is usually given medicine enough to last him for from five to eight days in cases that need long treatment, so they are not coming back every day or two for medicine unless they need to be seen often.

The medical class, reduced to eleven in number, began regular work in the spring of 1902 under the tuition of Dr. Johnson and Dr. Ko. Dr. Ko is a graduate of one of Dr. Neal's earlier classes, and is a man of exceptional ability, not only as a doctor and teacher but also as a Christian worker.

This class has continued steadily at work and is now ready to begin its fourth and last year. One of the three years they spent with Dr. Jas. B. Neal in Chi-nan-fu, who, with his assistant, Dr. Ma, took them through chemistry, materia medica, eye, and skin diseases.

They are all Christian men. One of them was baptized by Rev. Arthur J. Brown, D.D., while on his tour through Shantung in 1901. With possibly one or two exceptions they all seem to be earnest and promising young men, and we hope for much from them in the way of good influence and Christian work wherever they may be located.

At the men's hospital and dispensary no charge is made to the patients. Hospital patients furnish their own food and bedding, and are expected to bring some one to help take care of them. In addition many of them make a contribution to the hospital when they leave. A notice inviting contributions is hung up in the waiting room, and the names of all contributors are also posted there.

The officials and business men of the city also contribute, and there is a small income from the sale of medicine to a partially qualified man who keeps a medicine shop

near by. I-chow-fu is neither a large nor a wealthy place, and the income from all these sources thus far has been very small.

In 1902 it was about \$ 78.00 Mex.

„ 1903 „ „ „ \$142.00 „

„ 1904 „ „ „ \$320.00 „

It is hoped, however, that as the plan becomes better known the people will respond more liberally until a large proportion at least of the expenses of the hospital and dispensary—which amount annually to about twelve hundred dollars Mex.—will be met by the people of the place.

NOTES ON CASES.

Although the majority of the cases have been such as are met with every day in hospital and dispensary work, still there have been a few perhaps which are worthy of special mention.

One was a case of displacement of the heart. The apex beat was plainly seen and felt about an inch below and a half inch to the right of the right nipple. There was no special deformity of the chest more than a slight flattening of the left side. The right lung appeared to be normal, but the left lung, or at least the place where the left lung should be, was filled with some solid substance. The patient was a middle-aged man in good health, and said, so far as he knew, his heart had always been that way. He came for some slight skin trouble, and we never saw him after the first time. This case, which came into the dispensary last summer, was the second one of this kind to come under our notice. The first one, a young man twenty-five years old, came the first year after the dispensary was open. In his case the heart and lungs all seemed crowded into the right side of the thorax. The apex beat was an inch to the right and a little below the right nipple. He had a

bunch as large as a child's head under his right scapula, which seemed to contain only normal lung tissue. The left side was considerably flattened and filled with some perfectly solid substance.

A case of rheumatism, with great profuse hemorrhagic purpura, was interesting on account of the medicine which the patient had previously taken. During the previous six years he had taken as medicine the brains of more than *thirty horses*, which he had killed especially for this purpose.

In another case severe dermatitis was evidently caused by the patient having taken as medicine for stomach trouble six hundred white grub worms found in the roots of the hemp plant. These had been cooked in oil and taken in ten doses, six hours apart.

Among the injuries were several interesting cases. One case, a young man about twenty-five years of age, was brought in with a compound fracture of the ilium and dislocation of the left sacro-iliac articulation.

An earth wall had fallen on him twenty days before, and when he came in the wound was a foul suppurating sore, and the man in a very emaciated condition. He came very near dying under the anæsthetic on the operating table, but having pulled through the operation he, much to our surprise, went rapidly on to a good recovery, and in ten weeks went home, able to walk about the yard with the aid of a stick. Three months later he walked in from his home, twenty miles, apparently as sound as any one.

Three men have come during the last two years with injuries from the large glass mouth-pieces of their pipes. Two were carters, and while sitting on their carts with pipe in mouth they drove so close to a wall that the end of the pipe, coming

in contact with the wall, the mouth-piece was driven into the back of their mouths. The pipe was pulled out, leaving the glass mouth-piece, about two inches long and over one-half inch in diameter, in the wound.

In one case it was imbedded in the cheek, and although entirely out of sight, was removed without much difficulty.

The other was forced through the back of the mouth, and lay at the base of the skull inside and back of the ramus of the lower jaw.

This was also safely removed, but not until after repeated efforts on the part of the surgeon and much suffering on the part of the patient.

The third case was that of a young man who, while intoxicated, fell with his pipe in his mouth. The pipe was forced down his throat, and the mouth-piece became detached and lodged in the right side of the neck just at the upper border of the clavicle. This was removed by cutting down on to it externally.

In conclusion, we would return thanks to God for the mercies of the years that are past, and hopefully trust Him for the years that are to come.

CHAS. F. JOHNSON, M.D.

A little Chinese house sheltered us for a few months, and on the 1st of September we *Medical Work*, moved into our *T'ai-chow-fu* new house, which is proving a very comfortable dwelling. During July and August, to escape the great heat, Mrs. Anderson and the children lived in a house that we rented on the hills five miles from the city. I stayed in the city, going up the hill occasionally to see them. I was thus able personally to superintend the building of our house as well as

to look after the medical work. In the former I was greatly assisted by our faithful city evangelist, Tsiang Faeh-piao, and in the latter by Dzing Pao-hyi, one of the medical students whom I had in training during my previous time of mission work here. During our absence on furlough he carried on the medical work. The medical work is carried on in a Chinese house. Besides the room used for a dispensary, there are four small rooms used as hospital wards. These have been well filled, sometimes overcrowded with patients, and many have been refused admission for lack of room. Last year over a hundred visits were made to patients in their own homes, and seventy-seven in-patients were treated in the hospital. Fifty-seven of these were men and twenty women. A goodly number of them were Christians, but most were absolutely heathen. All hear the Word of God and are faithfully dealt with individually about their spiritual state.

The dispensary had about 3,000 visits from 932 patients. We see these out-patients on Tuesdays and Fridays; but serious cases, and cases from a long distance, are seen on other days. It is quite a common thing for us to have people on one day from four and sometimes from six counties. These patients bring all sorts of diseases for healing; some can be cured in a few days; some are relieved at once, and others are old chronic cases that can never be well, although some of them can be partly alleviated. In these last cases a remark made by Mr. Hudson Taylor to me, a good many years ago, often comes to my mind. It was to the effect that chronic diseases are often God's way of bringing people to Himself, and that although from a medical point of view they are rather hopeless, they are very hopeful from the preacher's stand-

point; because the constant coming for medicine, although apt to discourage the physician, gives the preacher a better chance of leading them to Christ than would be the case with others that required only one or two visits.

Here is one such case—an elderly lady with several troubles. She feels that we have done great things for her, but she will never be well in this world. She has not allowed more than a week to pass during the past three months without visiting us; consequently she has heard a good deal about her sins and her Saviour. She now comes pretty regularly to services and would probably call herself a Christian. Just beside her is a case that will bring greater fame to the hospital. He is a lad of seventeen. We took him into the hospital four days ago suffering from a mysterious tumour that the Chinese doctors had been blistering, but which seemed to be getting worse instead of better. He and his father have been hearing a good deal of our message these days. They return to their home to-day—the son practically well, both of them grateful for the cure and with hearts opened to the saving message.

Yonder is another lad also seventeen years of age and a boy of thirteen. The latter is accompanied by his father, a man with one eye, and I judge from his general appearance, a yamên runner. He is deeply interested about his boy's eyes. They are inflamed and very painful. Both he and the older lad have their caps pulled down almost to the point of the nose to exclude the light. The younger lad has to be led by the hand. He cannot bear the pain of opening his eyes. The older lad is a draper's assistant, if I remember rightly. His eyes were as bad as the younger boy's when he was brought to us ten days ago by his mother. One eye is now

well and the other improving. These lads would have little chance of hearing the Gospel had they not come to be healed. Here is a strong young man travel stained—evidently come from the country. He has just arrived from one of our out-stations to report that the evangelist is sick and to take medicine back with him. When he completes his return journey he will have travelled fifteen miles on foot, and eighty miles by boat. We give him medicine and arrange that when the evangelist is able to travel he will come to us and we will nurse him back to strength in the hospital if the Lord will. He is one of our most faithful helpers, and the work would miss him greatly. The man standing by the door is a Christian. His wife had a leg amputated two weeks ago. She is very pleased to be free from the pain that she had endured nights and days for many months before coming for operation. I trust she is getting blessing to her soul and that when they return to their village, about forty miles distant, God may bless their testimony greatly.

These are samples of what we are meeting with. Pray for them and for us that we may be continually filled with the Holy Spirit and made channels of blessing to many.

JOHN A. ANDERSON.

We are told to look ahead, not back; but, when we write a report we must do both; look back to see what has been accomplished and ahead as we endeavor to see what the results may be.

As hundreds have been with us a shorter or longer time, and many of them we may never see again, it is only the Recording Angel who knows the results. Past experience has taught us that where we least

expect, we reap the most. They go from us interested and quietly seek more light at every opportunity, and at the same time are consciously and unconsciously teaching those about them. To be able to point out results for Christ is encouraging, but our greatest happiness is to be able to say to our Father each night: "We have tried to do our best" and leave all with Him.

Our hospital class has been studying these questions, "Who is the Prodigal Son?" and "What are Wasted Substances?" and the more we study the deeper we get into it, until we decide that if there are promises in the Bible that we cannot claim, it is because we have "wasted our substance" or opportunity. The result of all this is to make us more careful that in each case we do our best. Therefore quality not quantity has been our aim as it is in more of the mission hospitals than in the past. Now we are well enough known, so that we can give thorough work and not so much palliative. The people are not frightened, and are more willing for surgical work and other treatment which to them is heroic.

With our receipts we have gotten surgical instruments and operating room and drug room supplies, which have made it easier to do aseptic work. We are yet far behind modern equipped hospitals, but we hope each year to get more without asking for aid from home. We are still aiming toward a new operating room, surgical wards and rooms for our students, so as to have all of the present building for patients.

What we regard as a healthy growth in our work is the demand for private rooms which the people are willing to pay for rather than to go into the wards free. We are reaching a class that would not come to us otherwise. We need more such rooms. The complete

separation of one ward for offensive cases has helped us in keeping a better class in our wards. Pray with us that our desires may be granted soon by those who have this work at heart and have the money to send.

As we look back over the year we have much to encourage us, and many bright faces come up to us that have gone from us healed in body and soul, and we could tell of them here had we the space. "Anything to discourage us?" some one asks. Yes, much, if we would let it, but we do not.

One thing to encourage us is that baths do not so frighten them as a few years ago. No, they expect it if they come in, and the old patients tell the new how good the bath made them feel.

Our evangelist, Miss Wells, has been taken from us to carry on Miss Jewell's women's school in her absence on furlough. It is a case of robbing Peter to pay Paul, but there seemed to be no way out of it. She is missed much in the hospital, for in addition to her direct evangelistic work she so often cheered the sick ones who were with us.

Our faithful old matron, who has been with us over twenty years, had to give up, too feeble to go on. It was a great cross to her to give up. This had become home to her, and the work was dear to her heart. Well did she know Drs. Trask, Sparr, Cory, Pray, Carleton, Masters and the writer. She knows our good qualities and our failings better than we ourselves.

Our Bible-woman, Li Huoi-mu,

has taken her place nicely, but no trained Bible-woman could be spared to fill *her* place, but one of Miss Jewell's last graduates is working in nicely.

Dr. Masters, feeling that her health demanded her leaving Ngu-cheng, was appointed here with us. In addition to her overseeing the student who is residing at Ngu-cheng and doing the medical work there as best she can, and the work of being W. F. M. S. treasurer, she has looked after three of the schools that are in our care and taken charge of outside calls and foreigners. She goes home in January on furlough and to her mother.

We graduate a class the coming year, and hope to take in a new class, by whom we hope to do better each year as the classes come to us.

We send thanks for the boxes and cards that kind friends have sent the work. Three boxes from Indiana and one from New York. More wanted, more needed. Bandages, old linen, soap, towels, handkerchiefs, cards, leaf clusters, dolls, always needed. Don't forget the hospitals. Our students like muslin and print as well as the school girls. Who will send muslin for operating aprons for the students?

Our statistics are as follows. The report of the evangelistic work is left entirely to Miss Wells:—

In-patients	...	...	...	...	956
Dispensary	...	...	...	...	7,246
Prescriptions	...	...	...	...	11,131
Seen at visits	...	...	...	...	1,302
Dressings changed since March 1st	4,576				

ELLEN M. LYON,
LUELLA M. MASTERS.

HEMORRHAGE FROM THE INTERNAL JUGULAR VEIN.

A POSSIBLE DANGER WHEN SCRAPING TUBERCULAR GLANDS IN THE CERVICAL REGION.

By W. E. PLUMMER, M.D., Wenchow.



This patient, whose photo was taken the day before the operation, was a man of fifty years of age; he had extensive tubercular ulceration of the neck in the area shown in the photo. The disease began, according to the patient's statement, one year before admission to the hospital.

Operation.

At the operation one of my students had scraped away most of the caseous material, and only one sinus on the left side of the neck remained to be dealt with. While scraping this sinus, which was about on the level of the upper border of the thyroid cartilage, blood began to flow from the opening in such a volume as to show that a big vessel had been opened. The flow was easily arrested by pressure, and I prepared to try and expose the injured vessel and ligature it. As the opening was enlarged the external jugular vein was encountered and ligatured, but without in any way lessening the flow from the wound. Deeper down the wounded vessel was found to be surrounded with caseous material, and every attempt to isolate the vein only led to a more profuse flow.

It was then thought that the patient could not sustain the loss of blood which any further attempt to dissect out the vessel would necessitate, and that as the parts were embedded in caseous material, there were probably other weak spots which would give way when handled; so the wound was plugged with *iodoform gauze* and firmly bandaged.

After Treatment.

The plug of gauze was removed piece by piece as it became loose, until at the end of three weeks after the operation all had come away. After a month in hospital the patient went home, feeling better, but returned three months later with a swelling about the size of a pigeon's egg, situated at the spot where the hæmorrhage had occurred, and where on that account the caseous material had not been all removed.

NOTE.—I do not remember being warned of this danger by my teachers, nor can I find any reference to it in my books; so I imagine it is only in advanced cases that the vessel walls are invaded. Hitherto I have always scraped these cases with vigour, but shall be more cautious in future.

Personal Record.

MARRIAGE.

At Hongkong, May 3rd, Dr. A. FAHMY, L. M. S., Chiang-chiu, Amoy, and Miss SUSAN R. DUYVEE, Ref. Ch. M., Amoy.

DEATH.

At Wuchang, July 18th, suddenly, BERNARD PRENTICE, infant son of Dr. and Mrs. R. H. GLOVER, C. and M.A., aged four months and one week.

ARRIVALS.

At Shanghai, June 7th, Miss E. L. STARMER, M.B., U.F.C.M. (ret.).
June 19th, Dr. HUME, Mrs. HUME and son, for the Yale Mission, Changsha, Hunan.

DEPARTURES.

June 24th, Dr. P. B. COUSLAND and wife, E. P. M., Chao-chow-fu, for the United States of America; Dr. E. REIFSNYDER, W. U. M., Shanghai, for the United States of America.

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ARTIFICIAL RESPIRATION IN ACUTE OPIUM POISONING.

By SAMUEL COCHRAN, M.D., Hwai-yuen.

Cases of acute opium poisoning may be roughly divided from a therapeutic standpoint into two classes: first, those in which the respiratory function is not seriously depressed by the poison; and second, those in which it is so affected that artificial aid to respiration is necessary. Cases of the first class almost invariably recover and need no extended consideration. On the other hand, under the usual methods of treatment, those in the second class usually die, the result being directly due to paralysis of the respiratory centre. Their course is very characteristic. Drowsiness is accompanied by shallow and infrequent respiration and moderate cyanosis; these symptoms become progressively graver; drowsiness becomes stupor, from which the patient can be aroused with increasing difficulty and finally passes into coma; cyanosis becomes more marked, and is accompanied by pallor; respirations are infrequent, perhaps only three or four a minute, and are sometimes of the Cheyne-Stokes type; as cyanosis deepens, the pulse becomes weaker and more rapid; some cases have clonic spasms; just before death, the pupils, which have been contracted, enlarge.

The usual treatment for the respiratory failure is artificial respiration by the Sylvester method, which somewhat modifies the symptoms just described; the colour improves, and with it the pulse; the fatal termination may be delayed several hours, and perhaps even permanently averted. As a rule, however, these patients do not recover consciousness; the amount of oxygen supplied to the brain is insufficient, and the excess

of carbon dioxide is too great. Besides the inefficiency of the Sylvester method it is open to the further objection of being extremely exhausting to both the patient and his attendants; fatigue alone would almost prevent its successful employment if it were in other respects an excellent device.

There is, however, another method of overcoming respiratory failure which, if not very new, is not as widely known as it deserves. Dr. G. E. Fell, of Buffalo, N. Y., advocated the use of a bellows to supply air to patients overcome by paralysis of respiration during general anæsthesia, leading it through a rubber pipe to a laryngotomy tube introduced for the purpose. To avoid this additional operation Dr. Joseph O'Dwyer, of New York, made an adaptation of the laryngeal tubes he had invented for the treatment of diphtheritic croup. The apparatus is very simple. The bellows, which are operated by the foot, have (as now manufactured) a chamber for a wet sponge to moisten the air delivered. They are attached by rubber piping to a metal tube provided with changeable tips to fit any larynx. There are no valves, but the physician's thumb is placed over an opening in the tube during inspiration; on lifting the thumb the elasticity of the chest walls causes a prompt and complete expiration. With each stroke of the bellows an adequate amount of air enters the chest, and is in turn immediately expired. In cases of respiratory paralysis from opium poisoning the effect is striking. Almost at once the cyanosis disappears, the lips assume their usual rosy colour, and the pulse generally approaches normal in rate and quality. After an interval varying from a few minutes to several hours the patient becomes conscious and often begins to struggle. If now the tube is removed and the patient allowed to sit up, he will remain conscious for a few minutes and breathing will be spontaneous. Gradually it becomes shallower and drowsiness increases; at the same time cyanosis appears, and in a few minutes the patient is again comatose with a depression of respiration amounting almost to complete paralysis. The returning failure of respiration may be delayed but not prevented by measures to keep the patient awake, such as slapping with a wet towel, the farradic current, etc. When cyanosis and stupor have returned, use of the O'Dwyer tube will cause the same prompt improvement as on its first introduction; this time the return to consciousness will occur sooner. After two longer or shorter periods the tube may be laid aside, and the patient will breathe spontaneously. In our cases the tube was necessary for a duration varying from one to twenty-two hours. In only one case was it required more than thirteen hours.

The behaviour of these patients with and without the use of the apparatus throws light on the causes both of the coma and the respiratory failure in opium poisoning, which constitute a marked case of vicious circle. Among the primary effects of the drug are a slowing of the breathing and a marked drowsiness; the diminishing of the oxygen inspired and of the carbon dioxide eliminated, intensifies the drowsiness, which soon deepens into coma. This causal connection between the depressed respiration and the coma is proved by the fact that the patient soon awakes when the movement of respiratory air is made sufficient by means of the apparatus. In turn the drowsiness further retards the inspiration, for when the patient is sinking into stupor after the removal of the tube, if he can be kept awake by conversation, or other means, respiration remains fairly good, while it quickly deteriorates if he falls asleep. The pulse also usually corresponds in a marked manner to the changes in the respiration, being very poor while the patient is cyanotic and improving when his colour is good. Probably there is here also an element in the circle; the insufficient circulation deepening the coma and further embarrassing the respiratory centre.

Since purchasing the apparatus we have had, among our patients treated for acute opium poisoning, eleven who required its use. Of these all but one were desperate cases, and yet all of them were carried through the period of respiratory depression and breathed again in a manner approaching normal. Perhaps a description of one or two of them will give a better idea of the effectiveness of the apparatus than statistics can.

The first patient of our series had taken a "large amount" of the sticky paste used for smoking and had vomited part of it. When we arrived, six hours later, he was deeply comatose and markedly cyanotic. Breathing was Cheyne-Stokes, each cycle lasting seventy-five seconds with apnoea of forty-five seconds. The pulse was 110 to the minute and feeble. The O'Dwyer apparatus was not at hand, and it did not seem possible that the patient could survive the ten minutes necessary to fetch it. He improved slightly under the Sylvester treatment, and when the tube arrived and was introduced there was at once marked further improvement. Lavage was performed (it can easily be done with the tube in place), and strong coffee and *magnesium sulphate* were left in the stomach when the siphon was withdrawn; we had no *potassium permanganate*, or should also have used that. *Atropine*, gr. 1/20, was given hypodermatically. The colour had meanwhile become normal soon after the introduction of the tube, and at the end of

an hour the patient awoke and dragged it out. After remaining awake for twenty minutes he gradually became drowsy ; cyanosis returned and the tube was re-inserted. At the end of fifteen minutes he again roused ; this time for a longer period. In all, the tube was used four times for a total number of three hours. Thereafter he was kept awake by the usual methods of slapping with a wet towel, etc. On account of a very poor heart action he received at different times hypodermics of *strychnine sulph.*, gr. 1/15, and *digitalin*, gr. 1/50, both without apparent result. His heart responded, however, to a hypodermic of *cocaine hydrochlor.*, gr. 1, which was repeated after several hours, apparently with good result. Experience with other cases, however, makes the writer think the drug a dangerous one for this purpose. After twelve hours the patient was apparently out of danger, and we returned home.

Another case was said to have eaten twelve drachms of the paste used in smoking. The drug was taken at ten a.m. and she had vomited a little of it. At two p.m. she was brought to the hospital in deep coma, markedly cyanotic, with very slow shallow respiration and contracted pupils. The tube was at once inserted, causing marked improvement of colour, and her eyes soon opened. In washing her stomach large quantities of brown fluid, smelling of opium, came away, and we used two large pailfuls of water before the washings returned clear. *Potassium permanganate* was used with the lavage and *atropine sulph.*, gr. 1/25, was given hypodermically. After the lavage a pint of hot coffee and an ounce of *magnesium sulphate* were left in the stomach. She was semi-conscious all the afternoon, with a good colour and pulse, and at 6.30 her stomach was again washed out, a further large amount of brown fluid coming away. At 7.30 the O'Dwyer tube was removed, but the patient soon became cyanotic, and it was replaced. At 9.30 lavage was performed, and at 10.40 the respiration tube was removed and laid aside, as the patient could be kept awake by the faradic battery. At midnight the stomach was washed again, and from then on the patient remained awake without help. At daybreak she went home.

These cases represent fairly the course of the respiratory symptoms as modified by the O'Dwyer apparatus. Unfortunately a return to consciousness and normal breathing does not mean that the patient is out of danger. Of eleven cases that we have treated, ten of them extremely severe, all of them have returned to consciousness and breathed normally, yet five of them finally succumbed. The following case is fairly representative of all :—

At nine p.m. he took two drachms of opium paste. When brought to the hospital at six the next morning he was deeply comatose and looked like a corpse, his colour being both pale and cyanotic. His pulse was 120 to the minute and weak, his breathing was Cheyne-Stokes and had a long period of apnoea with each cycle. The tube was introduced, and the quality of his pulse and his colour at once improved. His stomach was washed with a solution of *potassium permanganate*, and coffee with *magnesium sulphate* was administered. At 8.15 the tube was removed, and the patient could converse, but drowsiness came on, and his pulse deteriorated, so that after an hour it was again inserted, the pulse improving at once. At 12.30 he dragged out the tube, but he immediately got drowsy with a very bad pulse, and it was re-inserted. At half-past one p.m. the tube was taken out, but we had to replace it again immediately. At three it was removed for an hour, to be again used from four to five o'clock, when it was taken out for the last time. By eight p.m. his breathing was satisfactory, though he was still drowsy. During the period between ten a.m. and eight p.m. his pulse had been poor, and at noon hypodermoclysis was done, twelve ounces of *saline solution* being given. He also received during the day hypodermics of *atropine sulph.*, gr. 1/16; *adrenalin chloride solution*, one to one thousand, min. 6; *caffein*, gr. 1; *strych. sulph.*, gr. 1/30. His stomach was washed at intervals. At three p.m. sixteen ounces of urine were drawn by catheter, and twelve hours later about the same amount. His condition improved steadily through the night until ten the next morning, thirty-six hours after taking the drug, and we thought him out of danger. At eight a.m. he was hungry, and ate a bowl of rice gruel. At noon he became stupid, and his temperature was found to be 104.6. His pulse was 105 to the minute and strong and his breathing satisfactory. At two p.m. his temperature was 105, and he could hardly be aroused; his pupils were widely dilated; he had muscular twitchings, and his lips were drawn to the left. A cold sponge bath reduced his temperature to 103 and his pulse to 84 to the minute. At five he was in coma with dilated pupils; skin dusky in colour, stertorous breathing, pulse full and regular, 120 to the minute. His reflexes were active, and there was marked subsultus tendinum. There were no signs of pneumonia. He had at this time three periods of apnoea of about two minutes each as estimated by a Chinese assistant. Soon afterwards he was taken home by his friends, and died at midnight, fifty-four hours after taking the poison. Neither this nor any of our cases were habitual users of opium.

We have much to learn concerning these cases, both as to the causes which determine their death or recovery and as to their treatment. Unfortunately we are prevented from learning much experimentally from animals by the fact that they act very differently from man under toxic doses of opium. Recently Hirschlaft* has reported a successful antitoxin to opium, and it is possible that this might save many patients. Be this as it may, the O'Dwyer apparatus has in our hands saved fifty per cent. of the grave cases in which it has been used, cases not one of which would perhaps have survived under other forms of treatment at our disposal.

There are two legitimate objections to its use; neither of them vital. First, it is rather severe on the larynx. Hoarseness and aphonia are to be expected for a day or so following its use, but we have never seen worse results than these, except one case, which had a bad bronchitis. Second, it needs a familiarity with the anatomy of the throat to enable the operator to introduce it. Our Chinese assistant has tried several times, but only once succeeded. The teeth must be separated by a gag, the left forefinger is placed behind the epiglottis and presses it forward. The right hand introduces the tube, its tip following the left forefinger and the posterior surface of the epiglottis into the larynx. A physician would be very unlikely to fail in its introduction. In its favour are its efficiency, which means the difference between life and death to some of these patients and the ease of its manipulation. After it is once in action the tube may be entrusted to an assistant or orderly, while the bellows can be worked by a coolie. The bellows at present furnished with the set are not very durable, but there has recently been published the description of an improved apparatus with an air pump instead of bellows and with the tube tips made of flexible rubber, which would be less likely to injure the larynx, but without having seen it, it is hard to say how important the improvements are.

Any who are interested in this subject are referred to a very interesting article by Dr. W. P. Northrup in the Medical and Surgical Report of the Presbyterian Hospital, New York, Vol. 1, in which are reported a series of eight cases of respiratory paralysis from various causes in which this apparatus was first used.

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"SELF-SUPPORTING MEDICAL MISSIONARY WORK."

By IDA KAHN, M.D., Chinkiang.

To the many of us no doubt the thought naturally arises that we have enough problems to deal with in our work without having to take up the irksome question of self-support. Yet at the present time, when every strenuous effort is being made to evangelize the world in our generation, any plan which can help forward such a movement at once assumes an aspect of vital importance in our eyes. Let it not be presumed that self-support of the work is to be recommended as possible to every medical missionary. On the contrary, I fear only by those fortunate enough to be located in large cities could the effort be attempted with any great hope of success. Yet in a measure the question concerns every one of us, because in its different phases self-support is sure to be pressed upon all of us with more or less force. Personally my work was undertaken in Nan-chang, partly from faith in the principle and partly because there were no funds available to institute medical work on any other basis. My faith in the principle is founded upon the belief that anything of value is more appreciated when something has been asked in exchange for its worth from those perfectly able to effect the exchange. Probably no one would deny that the skill of even the most mediocre Western practitioner is immeasurably above that of those self-constituted "doctors" who throng about us. Then why not show to the Chinese that such knowledge and skill is worth having? Never shall I forget one of the early lessons which my former colleague and myself learned by bitter experience. The child of two of our Christians of long standing and fair means became ill, and we were asked by a fellow-missionary to treat the little one. The child was seen and prescribed for. After one or two doses of medicine had been erratically administered the whole was thrown overboard and a long line of native physicians ushered in succession. The mother took care to let word reach us that at last she had found a fine physician and the one-thousand-cash doctor was really worth having. Alas for her hopes! Her money was spent in vain, and after another relay of quacks had gone through the rounds some one with a little Western learning was called in and confirmed to her our diagnosis, but it was too late to save the little one. Were we entirely free from blame in the matter? Had we enforced our usual charge of five taels, or even half that sum, our medicines might have been given a fair trial, for, mind you, the child did not get worse under

our drugs. The sad point of the story is that they did not stop with calling in the quacks but had the idols brought in as well. Other cases present themselves to my memory also. One Tai Tai, afflicted by a loathsome disease, had been repeatedly restored to health by us, but she was weak-minded and obstinate, and when she returned to her distant home would not keep up the treatment. During one of her relapses I was sent for and found she had not only spent hundreds of dollars in getting quacks from the neighbouring provinces but also had tiny vials of their medicines around her, which she calmly told me had cost her a hundred dollars each. Meanwhile our medicines were reposing serenely somewhere in the cupboards! My face tingles now at the thought of how imbecile I was not to have made her pay in proportion for the help which she received from us.

But can best results be expected from self-supporting work? The limitations are such that perhaps fewer of the poor may receive physical relief and consequent spiritual direction, but the general funds that are not applied here are left for other places. Still in a sense it can be said that fine results may be obtained from such a work. The ordinary people who seek help from the missionary will retain a higher measure of self-respect and also suspect less the motives of the benefactor. The rich will appreciate more highly the service received, besides having the added glow of satisfaction in helping forward a worthy charity.

How may we promote self-support? By making charges more adequate to the service given. Of course under many circumstances we may never think of making any charge; for instance, I never charge anything for the suicide cases which come to our dispensary, because such emergencies must be treated too spontaneously for determining charges. There should be no ironclad rules, however; each case must be counted on its own merits. Generally speaking it might be well for the physician to state plainly that the very poor are to be treated free of charge, and have medicines and occasionally food supplied gratis. Those a little better off may help a little in paying for their medicines. Those who are able may pay entirely for their medicines. The next step above that is to pay partially for treatment as well, while the highest grade pay in proportion to the amount of help received. All this means a great deal of thought and care on the part of the physician and assistant, but gradually it will become routine work, and so demand less labour. Often the question may be safely left to the patients themselves. I have had a few cases which paid me far more than I had thought of receiving from them. Again I have had amounts

paid which I have caused to be refunded in order to enable the patient to obtain better nourishment with the money. The people soon realize that all this is being done in order to effect the best results and are not always slow in showing their appreciation. And may we not hope that since our services are to be paid for by the rich they will not put off sending for us until the last moment, when the only thought to their mind is "死馬做活馬醫," namely "'Tis now a case of a dead horse to be treated as a live horse." To me at least it has often been a consolation when I have been called to see a patient fairly moribund that my time and trouble have been paid for and the waste at any rate could not be laid at my door. In connection with the question of charges it seems to me rather absurd to make a paltry charge of one or two thousand cash, or even five taels of silver, for difficult obstetrical cases which demand our utmost skill and strength, when for treating such normal cases amongst Europeans we obtain fifty dollars or more in each case. This too in face of the fact that the old midwife probably gets as much as we do. I firmly believe that when we charge a better sum they are much more apt to allow us to follow the case through, for what is worth beginning is worth keeping up. I make now an initial charge of ten taels for such cases and insist upon at least one after visit, for which I charge at the rate of five taels if the people are rich and nothing if they are merely well-to-do. If a few more visits are needed, as is generally the case, I usually leave the matter to their discretion, and so far have not had any cause for complaint. This of course is only cited as one mode of making charges. The physician who treats both men and women stands a far better chance for accomplishing self-support since the men hold the purse strings, and their own diseases influence the grasp more immediately. We have had men promise us any amount of money we might see fit to charge if we would only treat them. Unfortunately we did not feel as if we could accept such assistance, even in a good cause.

Has self-support really been accomplished in our instance? Up to the present time not fully, since there is a debt unprovided for, but faith still claims the future. The debt is accounted for largely by the high house rent we have been compelled to pay. It may be an item of some interest that during this second year we have treated six thousand dispensary and out-patients and have received for our services over one thousand and five hundred dollars. But this has been work without a hospital. It remains to be tested, should we be providentially provided with a hospital plant in the future, what we might accomplish along the line of self-support.

Is a self-supporting work a missionary work? Assuredly yes, for is not the money thus gained used in giving relief to the needy poor whom we always have with us? If the missionary herself is not self-supported, her work should certainly be credited to those who pay her salary. And if all money received goes again into the work to increase its efficiency why may it not be counted missionary? Part of it is given as thankoffering by those who are not Christian and all is given for value received from Christian effort. Our Lord healed diseases with a word, and without money and without price. If we ask, "What would Jesus do?" under our existing circumstances, the suggestion comes to my mind that it would be something different in form, but not in principle, from what He did in a different land under far different circumstances one thousand and nine hundred and more years ago. Some one says we are to follow Jesus, not to copy Him, and the principal thing, it seems to me, would be always to abide in the Spirit of the Christ by whatever method we feel constrained to render our little service.

SOME NOTES ON CHILDREN.

By C. S. F. LINCOLN, M.D., Shanghai.

For nearly six years it has been my privilege as well as pleasure to have the medical charge of our orphanage for girls at Jessfield.

We have them of all ages, from a few days or weeks old, as may be, to grown-ups. As a rule they are brought to us in infancy, in the helplessness and indigence of their much abused sex. I must say that, considering their social strata and the conditions under which they came to us, they strike me as being more healthy than the same class of children with which I have had experience in America. I do not recall more than one or two among those brought to us who showed the syphilitic taint; a number have been strumous and a few tubercular. Not infrequently they show the effects of neglect and starvation, but that is another story, and they soon outgrow them.

For some years before my coming to China the orphans were housed in a building on the site now occupied by St. Mary's Hall. When the new building for the latter was erected the orphans were necessarily moved, first into a small building in the rear of the old St. Mary's Hall, formerly used as an infirmary for that school, and next into an old double Chinese house while the new orphanage was under construction. In both the old buildings, owing to overcrowding and the well-known

tendency of the native to reduce the circulation of air to the minimum, the amount of illness markedly increased mostly in the line of the respiratory system.

In the last five years we have had no epidemics of the exanthemata, diphtheria or cholera and but two cases of typhoid. We have occasional gastro intestinal disturbances, which are generally easily accounted for, and in the last three years only one case of dysentery. Since the introduction of the Shanghai water into the compound the cases of intestinal disturbances have decreased in frequency and number.

With Chinese, as with other babies, the *sin qua non* is proper care; given that and they will flourish, even though the surroundings are not all that they should be; without it, like their little foreign prototypes, they perish.

There is no striking difference in construction between occidental and oriental babies. Both will thrive on milk of the proper quality and quantity, preferably mother's, but as that is not always to be had on demand in an orphanage, the usual modifications of the bovine article are utilized for their full value; and even as at home we find that sometimes milk does not agree, and that someone of the infant foods, or a combination of it and milk, has to be used. It is safe to say that there is no golden rule of infant feeding but commonsense, which means watching the baby if it is turned to practical account.

There is a tendency among the Chinese to rush the poor little bottle sucker too early in life on to starch food, which is done by stuffing him in between feeding times, probably to subdue the voracious little appetite with a flour abomination called *na kauh*, which looks and tastes like magnesia. I believe one of our babies actually died last year as a result of its injudicious use, and as soon as we found out the cause we confiscated the article, though the lady manager, who knows the Chinese "root and branch," says it is quite impossible to prevent its use.

In the respiratory tract we find adenoids, enlarged tonsils, follicular tonsilitis, bronchitis, simple and capillary, and tuberculosis. Croup seems to be rare, as is also croupous pneumonia. Of course we have nasal catarrh, which seems to be well nigh universal among the Chinese little folks. For the colds and coughs to which my little flock are subject I have found a mixture which I brought from America of great service. It has been in use for years in an orphanage with which I was connected. It went by the name of Larrabee's fever mixture, after the beloved physician who for a score of years ministered to its inmates.

The ingredients are :—

Spts. Etheris nitrosi	...	...	...	...	...	I	oz.	30.
Potass. acetatis	...	...	...	...	...	1½	oz.	45.
Spts. mindeneri	...	...	...	...	...	...	...	...
Aqua Camph.	...	...	...	...	...	aa	xx	oz. 620.
Syr. Simplicis	...	...	...	...	...	q. s.	...	...

I generally add *tr. belladonna*, ½ oz. 15, and in special cases to definite amounts of the above mixture may be added *tr. ferri chlorid*, making practically Basham's mixture, or *tr. aconiti* in sthenic conditions. The objection has been made to the prescription that it contains no *ippecac*. It may also be objected to by some as being too much in the nature of a shot-gun mixture, but if the biblical test of efficiency be applied, it has certainly proved its usefulness, and any one has the right to modify it in any way he sees fit.

There is the usual line of digestive disturbances, of which fermentative diarrhoea and mucous colitis seem to be the most common. Dysentery with our children has been, I am thankful to say, very rare.

Malaria we have to some extent, though the anopheles mosquito is much rarer with us than in some other sections of Shanghai.

Rhenmatism is an occasional visitor, but we have had no severe cases. Enuresis is also fairly common on some of those that did not respond to hygienic measures. I tried the solution of *atropine*, $\frac{1}{16}$ gr. to the drop; one drop given in the morning and two in the evening with marked improvement.

I notice in a recent number of the American Association Journal Ostheimer, of Philadelphia, at the children's dispensary of the University Hospital, uses a solution of *atropine* and *strychnia*, $\frac{1}{16}$ grs. of the former and $\frac{1}{16}$ grs. of the latter to the drop; the initial dose being one drop daily, increased by one drop daily until the enuresis ceased or the physiological action of the drugs appear.

It is needless to remark that a solution of that kind should be in charge of some reliable person.

In conditions of malnutrition and struma Kepler's preparation of malt and oil has been very effective. I have yet to see a case of rachitis in a Chinese infant.

Another ailment that has afflicted us to a considerable extent is ferunculosis. I have not yet discovered a pauacea for boils or any absolute method of aborting them, and have nothing new to recommend except that an infusion of a Chinese remedy, 花椒, the seed of some variety of *xanthoxylon alatum*, has proved very effective in relieving the irritation of the surrounding skin, and so far as I can see seems to limit the spread.

We have occasional epidemics of conjunctivitis, simple and granular, but no true tracoma. The probable cause of much of it is the carelessness of the children in wiping their eyes on anything that comes handy, mostly their grimy little fists. I will say that all reasonable care is taken about the use of towels, but you who know the Chinese manner of living know how difficult it is to limit such a thing as a towel to a single individual or use.

I find that the condition, if seen early, responds readily to such remedies as *boric acid* and *zinc sulphate* solutions and *yellow oxide*, and for the granular conditions I use the crystals of *alum* and *copper sulphate* or *tannin* and *glycerine*. Most of the little ones, when they come to us, bring with them one or more of the parasitic affections to which human flesh is heir. *Pediculi*, scabies and *timnea* quickly disappear under the influence of improved hygienic requirements and medication.

From the cradle to the grave the universal omnipresent parasite upon Chinese hospitality is the lumbricoid. I know it always strikes the new-comer with surprise, if not dismay, to find out how excessively common is this form of inhabitant among all classes of Chinese and even the foreigners, but he soon learns to look upon it as one of the natural afflictions of life in the East to be attacked as periodically as malaria and like the latter to be regarded as a possible factor in most any disease. One of the most troublesome conditions which I have met with, and for which I have not as yet found a remedy, is one of the numerous forms of head affections, probably parasites, which masquerade under the name of *bah lieu deu*. This particular variety looks like a patch of *saborrhœa* or *psoriasis*, and does not affect the integrity of the hair, in which it differs from *favus*. When the outer crusts are removed by softening, the underlying skin has a pearly, semi-transparent appearance. There is little or no itching. Dr. Jefferys and I made a microscopic examination of scrapings from the head of one girl, whose head has resisted everything we have tried upon it, and we were unable to find anything characteristic in it.

In the summer of 1903, while the orphans were still in the old double house, four of the children developed marked œdema, which first began in the legs and face. I happened to be away from home at the time and, as the house was very crowded, they were sent in to St. Elizabeth's Hospital for treatment.

I do not know the way in which the first cases developed, but judging from some of those who were afterward attacked they began either abruptly or so gradually that at first the condition passed unnoticed. In one child, who subsequently died, I believe there was

some paresis from the start. They were put on tonic treatment with digitalis, and on my return on the 28th of August three of the four were convalescent; the fourth, a child of about ten, was in very bad shape—extreme œdema and paraplegia. She died suddenly a few days later.

I suspected beri-beri, but as I had never seen a case did not feel very sure of it. No more cases developed that year.

In the summer of 1904 seven of the children were attacked in a similar way, but only one was confined to her bed or had any severe paretic symptoms. The others were all able to walk, though in some the gait was shuffling, and in all the knee jerk was either diminished or abolished, and all had some œdema. The heart symptoms, except in one girl, were not marked, and there was little or no fever. All the cases would therefore come under Dr. Manson's classification of the mixed paraplegic and dropsical type. I asked Dr. Boone to see them, and he confirmed the diagnosis of beri-beri and suggested a line of treatment that was carried out. I regret that I did not keep notes on the cases. The children were taken from all work and study and were kept out of doors most of the time. They were also put into a room to sleep apart from the other children. Dietetic: rice was stopped and barley substituted, much to their disgust. To their list was also added beans, meat more often, and bread. Great was the lamentation over the loss of rice, and I believe most of the Chinese, as well as the children themselves, thought they were being starved.

Treatment.—They were first put on a diuretic mixture with digitalis, and later, as the dropsy subsided, given Easton's syrup.

There were no more cases, and they all recovered in about six weeks. Since then barley has been incorporated as a regular article of diet in the orphanage, and the children eat it once a day, mixed with their rice. Slight changes were made in the dormitories to insure better ventilation without draft by taking out one pane of glass from each window on the verandah side and putting mosquito wire in its place.

The orphanage is situated on high ground for this region and is not overcrowded. At present we have fifty-two children.

I can see no reason why there should have been a recurrence, unless it be due to the rice or some subtle influence which we do not appreciate. At present the cause of beri-beri is too obscure for one of so slight experience as I to more than hazard a guess at it. Such in brief are some of my experiences with the little people of China. They are probably much the same and less extensive than many of you have had, and I feel that I ought to apologise for inflicting upon you such a commonplace paper.

FORMOSA UNDER THE JAPANESE, WITH SPECIAL
REFERENCE TO THE TREATMENT OF
PLAGUE IN THAT ISLAND.

I have been asked to give a short account of the island of Formosa under Japanese rule, with special reference to medical and hygienic progress there.

I had had no idea of doing this when I came to Shanghai, and this must be my excuse for a poor and very incomplete paper.

The Japanese have now been in possession of Formosa for ten years, and coming thus under the guiding power of a people with a special gift for hygienic progress the conditions in the island have very greatly improved.

The cities of the old Chinese type have to a great extent disappeared, as the authorities have driven great roads through them in all directions. Further, much energy is devoted to street cleansing; large drains are built on both sides of the main thoroughfares and the refuse is removed daily from the Chinese houses. Any accumulation of dirt, in fact its very appearance outside the houses at any hour except that for the general collection, is visited with a heavy fine on the owners of the offending houses.

For sanitary purposes in this and following descriptions I shall refer to the southern capital—Tainan. The city is divided up into districts, and each district is again divided into groups of ten households each. Over each district there is a salaried Chinese official, and over each group of households there is an honorary head man. The fact, however, that his office is an honorary one does not take from him any of the responsibilities or duties of office, and if he fails in this he renders himself liable to heavy punishment. It is the duty of this lesser official to report to the higher one all cases of illness, and the higher one in turn reports to the Japanese. I do not know how far this is strictly carried out at ordinary times, but in times of epidemic sickness every case of illness, however slight, has to be reported under the penalty of a fine of \$200.

Probably this paper might be made most interesting by giving a brief account of how an epidemic of plague is treated. Plague then having declared itself in the city the vigilance of the officials are redoubled, and almost every case of illness, however slight, receives the attention of one of the medical officers, whose name is Legion.

Immediately on the declaration of plague large hospitals are prepared outside the city, and all cases or suspected cases are immediately transferred to these. Further, some of the largest temples are seized by the authorities, and all healthy people from plague-infected houses are removed to these and kept in them for a few days till it is certain that they have not themselves received the poison.

Houses where plague has occurred are visited by a small army of officials, who whitewash the walls, scatter *chloride of lime* about the place and seal up the door, placing a small yellow flag over the front of the house to warn every one concerned that the house is not to be entered. The flag is kept up, I believe, for seven days.

At all times a reward is offered for the capture of rats and mice; four cents for each rodent and a lottery ticket, the lotteries being drawn once a month. But in time of plague a further, and, as we should think, a terribly arbitrary law is brought into force. Each house under penalty of a fine of \$5 has to bring in two rats a week to the authorities. Outside the city a rat crematorium has been established, and I am told that as many as 20,000 rats have been burnt here in one day.

Further, by a system of prophylactic inoculation the authorities strive to prevent the spread of the disease. The prophylactic vaccine, as prepared by Kitasato in the Tokyo laboratories, consists of a culture of plague bacilli on agar-agar; the culture is scraped from the surface of the medium, sterilised by heat and emulsified. This emulsion is then injected in doses varying from .5 to 1.5 grains at a time.

As far as possible three injections are given at intervals of one week; the doses being .5, 1.0 and 1.5 grains, but two injections, viz., that of the smallest and largest amounts, are considered sufficient.

The system of prophylactic inoculations is a compulsory one, and the officers of health, attended by the police, make descents on a district, those most affected by the disease, and inoculate as many of the inhabitants as they can catch.

The proceedings at the inoculation are methodical in the extreme. I invited the senior medical officer to visit our boys' school last year and inoculate the boys, and a short description of the methods may prove interesting.

First there come a couple of coolies carrying large amounts of the vaccine and of various lotions. Then a couple of policemen, and then the doctor and his staff of four. When everything is arranged one policeman writes down your name, age, district and number of house on a slip of paper, and as your turn comes this is handed to one of the assistants, who enters it under the proper district in a large book and

notes whether this is your first or second time of inoculation. With your shirt pulled down you seat yourself on a wooden stool with your back to the operator. One assistant picks up the muscles of your back just over one scapula, the principal drives in his needle and injects the vaccine. No. 2 assistant wipes the spot with a swab of iodoformised collodion. No. 3 sticks a small piece of strapping over the spot, and the operation is over. The time it takes is infinitesimal, much less than it takes me to read the description. While the next patient is taking his seat the doctor washes his syringe in strong *carbolic* lotion and draws up another charge of vaccine. The immediate effects of the inoculation are very slight; some swelling and tenderness about the site of injection, and possibly a little malaise, but this usually passes off in the course of some twelve hours. After a dose, however, of 1.5 grains of the vaccine on the second occasion the reaction is decidedly severer. For myself, and I have been inoculated four times—twice on each occasion of an epidemic of plague—the result of the second and larger dose has been a good deal of aching pain in the muscles into which the inoculation has been given, lasting for some twenty-four hours, and a feeling of malaise with a temperature of about 100 F. coming on about six hours after inoculation and lasting some thirty-six hours. The discomfiture was not, however, enough to prevent one's doing the ordinary hospital work.

Occasionally, though very rarely, one meets with idiosyncrasies, where the patients suffer somewhat severely as a result of the inoculations. The only case, however, that I have met with out of a very large number inoculated was that of my own wife. After the inoculation of the smaller amount, .5 grains, she suffered from great swelling at the seat of inoculation and an erythematous eruption extending about six inches on each side. Accompanying this was fever, ranging from 100° to 101°, lasting for some three or four days, and she was confined to her bed for about this period. She did not undergo a second inoculation!

Now with respect to the results of this inoculation process. We have had two epidemics of plague since I came to the island of Formosa: one in 1901 and one in 1904.

The epidemic of 1901 was by far the most severe. I published an account giving the statistics in the *Journal of Tropical Medicine*. I did not expect to read a paper on this subject when I came to Shanghai, and I have not got those figures with me; all I can say is that they told very heavily in favour of the inoculated persons.

The epidemic of 1904 was a much smaller one; here are the figures I have obtained from the Japanese medical authorities:—

Total number of inhabitants of Tainan district	...	...	...	...	...	...	...	49,667
Cases of plague	...	...	...	...	...	...	...	1,458
Deaths	...	...	...	...	...	...	...	1,202
Uninoculated persons numbered	...	...	...	...	...	...	...	39,879
Cases of plague in uninoculated persons	...	...	...	...	...	...	...	1,437
Incidence of plague in uninoculated persons	...	...	...	...	...	...	...	1 in 27.5
Deaths of uninoculated persons	...	...	...	...	...	...	...	1,195
Proportion of deaths to cases	...	...	...	...	...	...	...	1 in 1.2
Inoculated persons numbered	...	...	...	...	...	...	...	9,788
Cases of plague in inoculated persons	...	...	...	...	...	...	...	21
Incidence of plague in inoculated persons	...	...	...	...	...	...	...	1 in 466
Deaths of inoculated persons	...	...	...	...	...	...	...	7
Proportion of deaths to cases	...	...	...	...	...	...	...	1 in 3

That is to say, whereas twenty-one cases of plague occurred in persons who had been inoculated, this number, had they been in the same proportion as in the uninoculated, should have been 356. And whereas in twenty-one cases there were seven deaths, this number, had they been in the same proportion as in the uninoculated, should have been 17.5.

Though the numbers here given are comparatively small I think that there is a very fair case made out in favour of inoculation.

I should like to add one word to those physicians who are not personally much acquainted with the disease, and that is, the plague is a disease where the diagnosis can extremely easily be come to by the most simple bacterial examination. As you know there are three forms of plague—septicæmic, pneumonic and bubonic.

In the case of septicæmic plague the bacilli abound in the blood, and by a puncture of finger or ear a drop of blood may be obtained and stained at once with any of the aniline dyes after simply drying the slide and passing it through the flame. In the case of pneumonic plague the sputa teem with the germs, and again the same simple staining method brings them out. In the case of bubonic plague a hypodermic syringe is used to puncture the enlarged gland, and a minute quantity of blood or lymph drawn up in the needle and stained in the same fashion. I have never myself failed in obtaining immediately a positive diagnosis in any case which turned out eventually to be plague, and I need hardly point out how important this is when the dangers of introducing plague cases into the wards of your hospital are remembered. The whole process does not take longer than five minutes. Just one other remark I should like to make. Keep a sharp eye for cases of pneumonic plague, which is far and away the most infectious form and which does not always, in the early cases, assume that virulent type which text-books lead one to believe. Here is an example. A Chinaman, about forty years of age, was admitted to the Tainan hospital last spring suffering from respiratory trouble. I saw him myself on admission; he walked in with the other patients at the time fixed for

admission, not looking particularly ill, but complaining that he was spitting up blood-tinged sputa. Phthisis is of course rampant with us as elsewhere in China, and as I did not think him very important, and had not at the moment time to examine his lungs, I turned him over to my Chinese assistant in charge of my pathological laboratory, telling him to stain his sputum for tubercle bacilli. The Chinese assistant came to me a few hours later saying that he had done as I had told him and that he had found no tubercle bacilli, but the sputa was teeming with bacilli exactly like plague bacilli. I went at once to see the specimen, and found that he had reported correctly; the sputum was teeming with plague bacilli. I discharged the man on the spot, and heard a few days later that he had died of plague.

SUCCESSFUL SURGERY.

By JOSEPH GUY MEADOWS, M.D.

From my hospital experience with surgeons, numbering a hundred or more, some of whom are of international reputation, I am persuaded that they might be classified as follows: First, operators who rarely get a perfect result; many of their patients die; the condition of those who live, instead of being materially bettered, is often worse. Such operators are not successful operators. Second, operators who always get a perfect result, their operations being performed according to the best and latest technique. Their operations are always a success (?) Their patients die promptly. These are not successful surgeons. The third class is made up of men, radical, bold and daring, who "rush in where angels fear to tread;" men who perform wonderful operations, often getting perfect results. Such men are constantly making new discoveries, adopting new and better methods, and yet, while it may never be known to any but the nurses and house surgeons, their mortality too often runs high. These are brilliant operators, but not successful ones. There is a fourth class who get the best results with a minimum of mortality. These are our successful surgeons, and they are scarce.

The great majority of the first and largest class of surgeons, some of them well meaning to be sure, have three obstacles in their way to success—laziness, ignorance and cowardice. As a class they lack ability. Such men are dangerous. An ignorant physician is one of the most dangerous of men, not so much that he lacks a knowledge of the known in medicine, but because he does not know the boundaries of the unknown. Quackery flourishes most in the soil where neither the

practitioner nor the patient is intelligent enough to fear the consequences of ignorance. The small minority of this class lack only experience and opportunity. The second class, better termed butchers than surgeons, have been led through love of money and fame to make of themselves both liars and murderers. The third class of men, but for their lack of conscience, would be our greatest surgeons. This, however, is reserved for the last class, for men with less ability perhaps, but more conscience.

What, then, are the characteristics of a successful surgeon? I should place first that characteristic most lacking in surgeons: conscientiousness. Of next importance is a love for the work sufficiently strong to constrain one, not only to be willing to work, but actually to spend years in patient toil and drudgery. A lazy man cannot be a surgeon. It is not usually the man with the greatest native ability who succeeds, but the plodding, persevering, life-long student. One other point; a surgeon must, of all men, be a man of courage. The world is full of cowards. It is the one cause of failure of many professional men who might otherwise be men of great power. No coward can be a successful surgeon. He must possess "the lion's heart" and, where occasion demands, be able to operate on his dearest friend with the same calmness of body and poise of mind he would have were he operating upon a dog. The last characteristic I shall mention is personal magnetism. A successful surgeon is one who, by his every word and act, inspires his patient with a perfect trust; one who, after making a diagnosis of carcinoma of the rectum, can say with perfect assurance, "I can cure you," and then, after winning his patient's confidence, can calmly and frankly state to him his exact condition in all its seriousness. Such a man has done much already toward his patient's recovery.

DIAGNOSIS.

Having mentioned a few of the prominent characteristics of a successful surgeon, may I not now, in a brief and general way, call attention to a few important factors in successful surgery. Diagnosis—the most difficult and at the same time the most fascinating department of medicine and surgery—what shall I say concerning it? While I do not concede that it is the most important factor, I do maintain that it is an essential factor to success. There are men who tell us that the closed human body may become in the hands of a skilled artist as an open book. However, one should not become discouraged should he make mistakes in diagnosis. There has never lived the man who has not made many. While I have a respect akin to reverence for that man who, with his eagle eye and by means of his educated, sensitive touch,

can look through the human body as if it were a piece of transparent paper, yet I say again, one should not be discouraged if, after years of patient endeavor, he still finds it impossible to tell just how many warts are upon a certain mitral valve of an affected heart or into just how many fragments a certain bone is broken. I shall never forget the testimony of old Dr. Wyeth, a surgeon of wide reputation. While in hospital service under the old doctor, I have often heard him say that for the past ten years of his life he had never made a failure in diagnosis. The secret of his success lay in the fact that he would not make a positive diagnosis until after he could see with his eyes and handle with his hands. For the encouragement of any who may be of doubtful mind I give a case that came under my observation while in the hospital. When the patient entered the hospital I was instructed by the attending physician to take a careful history and to make a thorough physical examination, together with a blood examination, and a chemical and microscopical examination of the urine. History, briefly summarized, was as follows: Female, about thirty-eight years old, six weeks' illness, taken with pain in left lumbar region more or less constant, but somewhat paroxysmal, gradually growing worse, pain increased on slightest pressure, symmetrical enlargement in region of left kidney, increased dullness, and too painful for palpation, patient much emaciated, irregular fever, slight hectic symptoms with sweats and chills. Urine examination was negative; blood diminution of the red corpuscles and leucocytosis. What was the matter with our patient? We did not know, neither did the attending physician. Doctors Goffe, Wyeth and the late W. R. Pryor, all men of national reputation, were each in turn called in to see our patient. Some said one thing, some another. Tubercular infection, renal calculus, pyonephrosis, displaced kidney with torsion were each in turn suggested. A diagnosis was not made. All advised operation. We operated, finding the very thing toward which the symptoms pointed as most evident, yet unsuspected by any—a perinephritic abscess. We cannot hope to reach perfection in the department of diagnosis, but we must know a good heart from a bad heart, how to detect a normal functioning kidney and the nature and severity of a diseased one, an operable case from an unoperable one, a dangerous case from one not dangerous.

PREPARATORY TREATMENT.

The general preparatory treatment of the patient is of more importance than is usually conceded, is in fact of more importance than the so much talked of after treatment. Prior to every major operation I have

found it wise as routine practice to give *strychnine* in tonic doses for several days. If there be any cardiac weakness a longer course of heart tonics should precede the operation. Should there be no time for such a course of treatment *strychnine* can be used freely hyperdermatically, 1/20 gr. to 1/10 gr., and even repeated if necessary. As with the heart so the condition of the kidneys should be carefully examined, and where indicated tonic treatment given to correct any abnormalities. Water should be given freely and high rectal *saline* enemas twice daily for a week. The intestinal tract should be thoroughly cleaned out. For this purpose I have found it best to give the bitter extract of *cascara sagrada*, one drachm doses, the second night before the operation, followed in the morning by eight ounces of *hunyadi water*, or two ounces of the saturated solution of *magnesium sulphate*. One-fourth grain doses of *calomel* every half hour until two or three grains are given, followed in the morning with some saline purgative is also good. Concentrated broths and beef juices should be given every two hours, beginning forty-eight hours before operation. Milk should not be given where abdominal work is to be done, as it tends to produce gas. This is one of the most distressing symptoms after operation, and every possible precaution should be taken to avoid it. For abdominal work no purgative should be given as late as the night before operation. In major rectal operations, as carcinoma of rectum, high saline enemas should be given twice daily for three days prior to operation. Eight ounces of half strength *peroxide of hydrogen* injections should also be given every four hours. If there is no time for a purgative to be given and a vaginal operation is to be done, high soap-suds enemas might be given until the lower bowel is thoroughly flushed out. Much suffering can be avoided as well as some fatal results if this matter of the heart, kidneys and bowels is carefully attended to.

LOCAL PREPARATION.

Twenty-four hours before operation the patient should be given a warm bath. The future site of incision and surrounding skin should be shaved, scrubbed and a poultice of green soap applied for two hours, after which a second scrubbing should be made. It should then be washed with alcohol and a towel wet in *mercuric chloride solution* 1:1000 fastened on the part. This should be remoistened every four hours and left in place until time of operation. The temperature of the operating room should be as near seventy-five degrees as possible and well ventilated. A table for securing the Trendelenburg position in many cases is indispensable. A quantity of sterilized water, sheets, towels and swabs will be found necessary. The line of incision should be

swabbed with pure *tincture of iodine* just a few minutes before making the incision. Very fine linen thread for intestinal work, kangaroo tendons for pedicles, flaps of peritoneum, fascia, adhesions, etc., and silver wire for the integument, while more expensive, will be found to be the best ligatures. However silk, catgut and silk-worm gut respectively may be used instead. For non-infected cases dry sterilized gauze held in place by a complete covering of rubber adhesive plaster, which will aid in keeping the wound from becoming infected by meddlesome patients, and a close fitting bandage over this will be all the dressing needed. The instruments should be thoroughly sterilized by boiling ten minutes in a solution made strongly *alkaline* with washing soda.

A very important factor is the preparation of the operator and his assistants, as it is through a lack of this one thing that many patients are infected. It is here that an ounce of prevention is worth tons of cure. The operator who refuses to touch infected wounds with his hands is the operator who is least likely to have infection following his operations. Where it is possible never let your hands touch an infected wound. A man who operates, and at the same time has a dispensary hour, should wear rubber gloves always during dispensary hours. If your hands are never in pus, it will not be necessary to wear rubber gloves except in cases of suspected infection. Assistants should always wear rubber gloves. Operator and all assistants should wear long-sleeved, carefully sterilized operating gowns. One of the best methods of cleansing the hands and forearms—a thing which should be done most conscientiously—is as follows: After ten minutes scrubbing with brush in hot green soap-suds, using nail file, take a lump of *carbonate soda*, the size of an English walnut, and twice that quantity of *chlorinated lime*. Moisten these together and knead between the palmar surfaces of the fingers until a white pasty lather is formed and the mixture has become cool. The chlorine gas, liberated through the chemical reaction, is a powerful sterilizing agent, acting especially upon the ends of the fingers, the nails and the parts between the fingers. Wash off in clean water, and immerse the hands and arms to elbows in a 1.1000 *bichloride solution* for three minutes. In case the operator does not wear gloves, he should dip the tips of his fingers in *tincture of iodine*. Such preparation is expensive; but in comparison to human life it is nothing.

OPERATIVE TECHNIQUE.

Concerning the technique of the operation itself I have only three things to say—operate as quickly as possible, handle the living tissue as little and gently as possible, and ligate as few vessels as possible.

These points are worthy of our most careful consideration. Often I have seen patients practically die upon the operating table, not from the shock or the severity of the operation, but because of the length of time unnecessarily consumed in performing the same. Again, I know one successful surgeon who practically never gets infection, who attributes the secret of his success to the fact that he handles the living tissue so little and so gently. "Handle as you would your sweetheart's hand" was his advice. Lastly, ligatures crush the living cells, act as foreign bodies and are often a source of infection. In all probability three-fourths of the vessels ligated by surgeons could be controlled just as safely by hæmostatic pressure, a little time for the blood to coagulate and a little tortion. Besides a great deal of valuable time is thus saved during the course of the operation.

AFTER TREATMENT.

Concerning the after treatment there is little to be said, since in a case where thorough preparation has been made in every detail there is so little to be done in our hospital; gas ether was almost universally used for general anesthesia, it being considered safest. Practically all the patients were more or less nauseated, vomiting at times being a distressing symptom. The best thing for this is to wash out the stomach with warm water by means of a stomach pump before the patient recovers from the anesthetic, or afterward if preferred. The next best thing is to give the patient large quantities of normal saline solution to drink. No food should be given for twenty-four hours, and then only on condition that the patient is not vomiting; small quantities of broth, which are least likely to ferment, being tried at first every two hours. At the same time the tonic doses of *strychnine* should again be given three times daily. If the alimentary tract is found to functionate properly after broth is given, the solid foods can soon be substituted. *Morphine* should be used as little as possible, its greatest danger being that it only increases the already existing intestinal paresis. In such cases as major rectal operations, breast amputations and others, where much pain usually follows, the patient should receive a hypodermic of *morphine* and *atropine* before recovery from the anesthetic, and in a rectal case, where there is great pain, and where it is wise to prevent the bowels from moving for three to fifteen days, as in operation for prolapsed rectum or carcinoma, the *morphine* should be continued regularly as indicated. A very satisfactory *anodyne* will be found in a rectal suppository of *codine*, *belladonna* and *hyocymus*. Except in operations upon the intestines it is usually best to give a

purgative the second night after the operation. *Cascara* or *calomel*, followed in the morning with a saline, are recommended. Should you have an infected case to begin with, or be so unfortunate as to infect your patient, open up the wound at once to the depth of the infection. A towel wet in 1.3000 *mercuric chloride* should then be applied constantly. As a good antiseptic and at the same time *anodyne* and circulatory stimulant to healthy granulations, *balsam of Peru* and *castor oil*—10 per cent. to 50 per cent. of the *balsam*—will be found exceedingly beneficial. Pour on the *balsam* freely, after syringing out the wound thoroughly daily, with 50 per cent. *peroxide of hydrogen* and a *mercuric solution*. When the whole of the wound is afterward covered with rubber tissue the best results are obtained.

PROGNOSIS.

Concerning prognosis, I wish to say that the seriousness of a case is conditioned not so much upon the nature or severity of a given operation itself as upon who does it. No amount of therapeutical treatment can ever remove the cicatrix resulting from a burn. Just so no operation can ever make a new man of a patient. The failure to impress this fact upon patients has often resulted in a dissatisfaction of the patient and a neurasthenic condition that might have been avoided. And yet, while we cannot make new people of our patients, we must make better ones. Comparatively speaking it is seldom that we operate to save life but to better life. Therefore we should not call an operation a success because the patient lives. At one time we had nine separate cases operated upon for ventral hernia in our hospital, all resulting from primary operation. In some cases we found great masses of adhesions, making the patient's life almost unbearable. Such ought not to be. It is only as we recognize to the fullest extent the significance of the solemn trust of our patients, and the value of a human soul, that we are capable of the realization of our highest and best.

No department of the world's work presents a higher or finer motive than that which finds expression in the constant effort to relieve pain, heal disease and bring comfort to distressed humanity. Such occupation commends itself instantly to the sympathetic approval of all, and he who makes it his life's work has the right to feel that in no career could he be more closely treading in the footsteps of the great Master and Healer of men, who went about continually doing good. It is our fortune to be, in a sense, trustees of the highest interests of humanity, and we may justly feel that in our professional capacity we are the most thoroughly trusted of men. It is not merely the knowledge of the

inner life and character of our patients that come to us ; secrets of this kind we carry in common with other professional men, but to my mind the world can show no more perfect picture of the faith of man in man than the sublime trust with which the patient commits himself wholly to the hands of his physician, to be swung by him away from the shores of time and out into the sea of temporary oblivion, there to remain in blissful unconsciousness while the surgeon does his critical and delicate work. The confidence and trust thus exemplified is like that with which Isaac calmly awaited the stroke of Abraham's knife, and is more nearly than anything human, akin to that faith which, as intelligent beings, we must have in the overruling care of the great Creator, whose word called us into being and who holds us all as in the hollow of His hand.

The knowledge that our fellow-creatures do thus put such confidence in us, and rely so implicitly upon our skill and rest so unreservedly upon our protection, must be a mighty stimulus to rouse us to meet and to discharge to the utmost of our ability the requirements of the trust thus bestowed. The man who does not recognize this to the fullest extent, and rise to the occasion of its exercise, is not worthy of a place in the ranks of so noble a profession. He should seek a career where fineness and delicacy of apprehension are not such requisites.

Familiarity, even with the most sacred things, is likely to blunt the edge of reverence, and so it seems to be with the doctor of medicine. We stand continually on the border land of mystery. We have to deal constantly with the unseen forces of disease and death, from the reception of the new life as it comes first from the hand of the Creator, through all the varying phases of this earthly tabernacle, until the days come when even the grasshopper becomes a burden and the golden bowl is broken, and we watch the last flickering and expiring members as the flame of life goes out and the spirit returns to the God who gave it.

This is done so much as a matter of business that the tendency probably is, in great measure, to dull the sensibilities and cause us to be so taken up with the material and physical as to exclude proper consideration of the spiritual elements of man's nature ; and yet this need not be, for the examples of many of the foremost investigators, both living and dead, show us that a profound knowledge of science and a simple faith in the overruling Power that makes for righteousness may go hand in hand.

After all, the real dignity and glory of the medical profession is its steadfast recognition of the fact that its mission is to the poor and lowly. Its blessings, like those of the Gospel, are carried without money

and without price to those who are unable to make any suitable recompense for the service rendered. In the noble humanity of medical service its followers do not hesitate, if need be, to become the servants of the servants. If, like the apostle of old, we find it necessary to say, "Silver and gold have I none," we can also add, as he bestowed the healing touch, "but such as I have give I thee."

There is no special credit in doing that for which one is paid; that involves merely an exchange, and calls for no warmth of heart or the exercise of any spirit of generosity. That which gives the profession an abiding place in the hearts of men, and entitles it to signal honor, is the knowledge that the only stimulus required is the call of duty, and that whenever the need arises, every particle of skill and ability possessed, and which the nature of the case may demand, is freely placed at the disposal of the poorest and most helpless of God's creatures. The motto, "I serve," is most appropriate as the badge of our profession. And such service as is thus rendered with unaffected cheerfulness to the poor and unfortunate is of the essence of nobility, and is of the substance of true religion.

A CASE OF DYSENTERY IN HUNAN PROVINCE, CAUSED BY THE TREMATODE, SCHISTOSOMUM JAPONICUM.

By O. T. LOGAN, M.D., Changteh.

I beg to report a case that, to my mind, is suffering of the disease caused by the blood fluke, *Schistosomum Japonicum*. As this disease will likely be found often in the future, I would like to suggest that in the examinations of the fecal matter suspected to contain the eggs of this fluke, the smears be thin and free from vegetable fibres, so that the cover glass will lie flat, and furthermore that little pressure as possible be used and that the illumination be slight. These rules will appeal to those who have done considerable of this sort of work. Unless one observes these simple rules he will be sure to overlook, not only the egg in question, but other eggs as well.

Cheng, Chinese, eighteen years of age, male, reared in Changteh, Hunan prefecture. At the age of twelve, while engaged as a fisherman's assistant, he first had bloody stools, which grew worse, until at fifteen the disease had become well established and incapacitated him for hard work. Patient is only four feet six inches in height, has a cachectic look, but is not emaciated, neither is he of the bloated appearance one often finds in patients suffering of ankylostomiasis. The

EMBRYO INSIDE
EGG.

1

EMBRYO BURST
OF EGG.

2.



superficial veins over the upper part of the abdomen and lower part of the chest are much enlarged. Left lobe of the liver extends four fingers' breadth below the sternum and three inches to the left of the median line. The right lobe is felt two fingers' breadth below the ribs. Spleen is slightly enlarged. The urine is clear, amber-colored, and the patient has never noticed any blood. Microscopic examination failed to show abnormalities in the urine, although it was slightly albuminous.

The patient complains that he has, several times a day, pain in the abdomen, which is followed by a bloody stool. He has an average of four stools in twenty-four hours. The two stools examined contained considerable blood, well mixed with mucus and the fecal matter. The microscope revealed a few eggs of the tricoceph. dispar, the ank. duodenale and a peculiar form of lumbricoid egg that we constantly find here, the characteristics of which are its elliptical shape, thin shell, globular yolk, and its comparative freedom from the albuminous coating

that characterizes the typical ascaris lumb. egg. In addition to these I found eggs that are oval in shape, light yellow or clear in colour, larger and more nearly round than the ank. duodenale and containing an embryo. The embryo is the shape of a melon seed, one end being more tapering and provided with a rounded protuberance, which is joined to the body by a short neck. By using an oil immersion lens and carefully focussing on the different planes, one is able to distinguish rapidly moving cilia on the neck and narrower part of the embryo. The rest of the body also is ciliated, but not so markedly, and there is no apparent motion in the cilia. When the embryo is in the shell, the cilia appears, not as rods but like pigment granules, such as one finds in the malarial parasites, especially the benign tertian. In two instances I was able, by slight pressure, to burst the shell of the egg and study the embryo. It comes out as a shapeless mass, but soon assumes the characteristic shape. When out of the shell the cilia appear as rods which project from the body at different angles, depending on their location. I am not able to give a good description of the internal organs, as they seem very indistinct. Roughly speaking there seems to be a connection between the protuberance and the globules in the narrow part of the body. These globules seem to form a sort of a sac in some specimens.

The globules in the middle and wider end of the body are coarser and not so refractile as those in the narrow end.

I was led to examine this patient more carefully on account of the reprints of papers by Dr. Catto and Prof. Katsurada that appeared in the *Journal of Tropical Medicine*, March 1st and April 1st respectively. As the eggs of the *Schistosomum Cattoi* have not been reported to have been observed in the fæces, and as none found elsewhere have contained as embryo, one is led to believe that the eggs I have described and made drawings of are those of the *Schistosomum Japonicum*. The clinical symptoms tally closely with those described by Prof. Katsurada, and his description of the embryo applies in its main features to those I have studied, and I may say that I have observed dozens of these eggs, all of which contained an embryo. It has not been our policy to take into the hospital cases of the sort described, and we have not examined the stools of many out-patients who have passed bloody stools. I do not recall other cases presenting the signs and symptoms of this one, still it is probable that similar cases will be found, now that we are looking for them.

Medical and Surgical Progress.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

SPIROCHÆTÆ IN SYPHILIS.

An article in the *British Medical Journal*, June 10th, 1905, by Dr. E. J. McWeeney, gives an account of these germs, lately described as the cause of syphilis.

The description is, from the practical point of view, of little value to most of us, as the stain employed—giemsa mixture—is not one we are likely to possess, and the powers employed, $\frac{1}{20}$ oil immersion, is not one which many missionaries could afford. Nevertheless the general subject of the bacteriology of syphilis is of such general interest and importance that a few notes on the organism will not be out of place.

Description of Spirochætæ found.—Spirally twisted, extremely delicate organisms, actively motile, with peculiar corkscrew movement in either direction. Average length 12 μ . Thickness too small to measure. The coils were often seven or eight in number, not regularly spiral, more open towards the extremities. The smaller spirochætæ looked like detached flagella of the typhoid bacillus. They were granular in appearance. The spirochætæ were extra-cellular. In the fresh state they were often attached to the pus cells by one end and caused them to sway too and fro, or even dragged the cells along a little way by their vigorous movements. The end of the organism was sometimes seen to be completely buried in the cell protoplasm. Both ends of the spirochætæ were sometimes attached to the cells.

Concluding Remarks.—1. A species of spirochætæ has lately been shown to be a stage in the life-history of a trypanosome of the stone-owl. This raises the question whether all spirochætæ, for example those of relapsing fever, pseudodiphtheritic angina, and of tropical spiroellosis are also protozoa and mere stages in the life-history of flagellates.

2. A species of trypanosome is the cause of a sexual disease of the horse. This malady is not unlike syphilis in some of its manifestations.

3. Although trypanosomes are, as a rule, conveyed by an invertebrate intermediate host such as the bloodsucking flies, glossina and stomoxys, this need not be the case. The trypanosome of Dourine is conveyed from stallion to brood mare by direct contact, and can even pass the unbroken mucosa.

4. Kala-azar, a disease due to Leishman-Donovan bodies which are almost certainly a stage in the life-history of trypanosome has, even as I write these lines, been shown to be propagated by sexual cohabitation.

5. Metchnikoff has found spirochætæ in the syphilitic lesions which he has recently succeeded in producing in apes.

The above considerations would seem to render it not at all improbable that the spirochætæ may be etiologically connected with syphilis. Possibly the tertiary and congenital

forms of the disease may prove to be chronic intoxications due to the metabolic products of the spirochætae.

THE PATHOLOGY OF BERI-BERI.

The most recent, and to my mind the most interesting contribution to our knowledge of the subject of beri-beri, has been contributed by Dr. Hamilton Wright, Director of the Department for Medical Research, Federated Malay States, in a series of papers just published in the *Journal of Tropical Medicine*. Though it can hardly be said that his theory can be taken as proven, yet it is certainly worthy of more than a passing consideration.

The writer, after mentioning the various theories formerly promulgated—nine in number—goes on to state his own opinions in the matter in the following words: My own conclusion is that it is due to a specific organism that remains dormant in certain localities, but having gained entrance to the body by the mouth, it multiplies locally (in the stomach or duodenum chiefly), gives rise to a local lesion and produces a toxin that, gaining the general circulation, acts on the peripheral terminations of both afferent and efferent ordinary and vital neurones to cause a bilateral symmetrical atrophy, and that finally the organism escapes in the faeces, to again lie dormant in places.

There then follows a long detailed account of the observations made by the writer in the Kwala Lumpur old and new gaols, from which he concludes:—

1. Beri-beri is independent of diet, considered as diet.
2. The gaol itself is a focus in which the virus of beri-beri is generated.
3. Beri-beri is, broadly speaking, an infectious disease.

After further discussion Dr. Wright says on the nature of the infection:—Loss of appetite and oppression in the epigastrium is the first symptom complained of by those who contract the disease. I find it to be most pronounced in fatal acute pernicious cases, and the warrant for it is the angry inflammation and hæmorrhagic injection of the mucosa of the stomach and duodenum found post-mortem. I have never found the ankylostoma duodenale in any of these cases. The ova were specially sought for, but not found. There can be no question of the inflammation in these cases being due to it.

The theory of the causation of beri-beri that fits the above facts and all others observed in British Malaya is that given above. Further, that the specific organism escapes in the faeces and lodges in confined places through accident or the careless habits of those affected by the disorder, and that in the presence of congenial, meteorological, climatic and artificial conditions of close association from overcrowding, the organism becomes virulent and, gaining entrance to the healthy body in food, etc., contaminated by it, gives rise to an attack of the disease. The fact that the germ remains so closely fecal can, I think, be explained by its being at once destroyed by the action of direct sunlight, or that the presence of CO₂ or some other gas is necessary for its virile development. It seems, from my observations here, that the active stage of the organism in the body is between three and four weeks. I base this estimation on the facts that the preliminary feeling of oppression in the epigastrium ceases at the end of about three weeks, and that it is rare to find the lesion of the gastric and intestinal mucosa in cases of only six weeks' standing. Dr. Wright describes three forms of beri-beri.

Acute pernicious beri-beri, acute beri-beri, subacute beri-beri, are derived from these—Beri-beric residual paralysis or neuritis.

1. *Acute pernicious beri-beri.*—Commences with loss of appetite, followed by pain at the epigastrium, with a heavy sickish feeling, these sensations being intensified by pressure. Then the epigastrium would bulge and the throat be found moderately congested. No nervous symptoms are complained of at this stage, but areas of anæsthesia and hyperæsthesia may be found on careful examination over the distribution of the cutaneous branches of the musculo cutaneous and anterior tibial nerves. Early sudden intimations, however, are given which declare the action of the beri-beri virus on the entire cardiac nervous system.

Pathological Summary.—Stomach and upper part of gut are moderately dilated and empty. The walls of these parts are toneless. The gastro-duodenal mucosa may be moderately congested or exhibit an angry inflammation or hæmorrhagic erosion. In all cases the pyloric end of the stomach and the valvulæ conniventes of the duodenum are the seat of discrete or more or less confluent hæmorrhagic extravasations. Where extravasations are numerous and confluent, or where hæmorrhagic erosion has occurred, a thin pellicle of blood-stained mucus can be stripped from the underlying mucosa. As a rule the changes are confined to the duodenum, the upper few feet of the jejunum and the pyloric end of the stomach. Microscopically there is acute inflammation of the affected parts. The nuclei of Auerbach's and Meisner's plexuses are generally swollen, and inflammatory changes occur in the nerve fibres in the walls of the stomach and duodenum. In the damaged mu-

cosa I have observed, lying between the epithelial cells, a bacillus of constant morphological character in five of the six cases of acute pernicious beri-beri submitted here. A varying number of the primary set of esmenteric glands in the vicinity of the stomach and duodenum are generally found acutely swollen.

2. *Acute beri-beri.*—The general symptoms are much the same as those given above, but the sensory and motor paralysis is more marked.

It is rare for these cases to succumb in the acute stage of the disease, i.e., while there are distinct evidences of gastro-duodenal inflammation.

3. *Subacute beri-beri.*—The premonitory syndrome of gastro-duodenitis is slight. Œdema is never general, and the signs of poisoning of the cardiac nervous system is never marked. For the cases of acute and subacute beri-beri which do not recover on the elimination of the beri-beri virus, but remain in a more or less severe state of paralysis, I have proposed the name—beri-beri residual paralysis. The usual course is for such cases to succumb in from one to five years from heart failure or intercurrent affections. During life the symptoms are those of any chronic neuritis; the amount of paralysis of a given movement or quality of sensation depending upon the extent of the initial poisoning of the neurones involved.

Pathological Summary.—It is of great importance to remember that the large majority of cases of beri-beri which come to the post-mortem table are cases of beri-beri residual paralysis. These cases have been searched by many to discover the active agent of the disease. The beri-beric residual paralytic is simply a nervous wreck, whose active

cause has long since accomplished its work and departed. A gastro-duodenitis is never seen. Mesenteric glands are never found swollen; petechiæ are not to be observed in the serous membranes; granular degeneration of the kidney epithelium is rarely found. In fact, there are no positive signs of an acute process in any organ of the body.

Hygiene, Hydrotherapy and Physiologic Medication.

Under the charge of KATE C. WOODHULL, M.D.

THE TREATMENT OF SO-CALLED INCURABLE CHRONIC DISORDERS BY THE PHYSIOLOGIC METHOD.

In the past twenty-five years the medical profession have been making rapid strides out of the wilderness of blundering empiricism into the domain of science. Medicine is no longer merely an art, with methods based upon blind experience and ruled by changing fashions. The great discoveries of Liebig and Lehman and the science of physiologic chemistry which they created, prepared the way for the epoch-making work of Bouchard and his pupils on autointoxication, which has wrought a veritable revolution in medical theories and practices. Bouchard and his pupils, and others who have followed in the footsteps of this master, have shown us that the body is a veritable factory of poisons; that, in addition to the well known carbon dioxid, urea, uric acid, and other toxic substances, the body produces a multitude of far more subtle and infinitely more potent and mischievous poisonous bodies—the by-products and end products of normal metabolism or the result of abnormal metabolic processes.

The exhaustive researches of Bouchard, Roger, Charrin, and Boix, and in recent times a multitude of investigators, have traced to these poisons the origin of a very large number of the chronic nervous disorders, the diatheses, and the various degenerative pro-

cesses. Modern physiology has made clear to us the fact that these tissue poisons are normally disposed of, not alone by elimination but also and chiefly by destruction through the agency of certain organs which promote their oxidation, and certain other organs which produce antidotal and antitoxic substances. In fact it has been clearly shown by Charrin that the poison-destroying activity of the liver, and the development of antitoxic internal secretion by the thyroid gland and the suprarenal capsules and by various other structures, constitutes one of the most important of the body's defences against disease.

The knowledge which recent physiologic researches have given us respecting the methods by which the vital forces fight against invading microbes and other agents antagonistic to the body, together with the revelations of physiologic chemistry, have paved the way for a new therapeutics, the chief aim of which is the development of the natural disease-resisting resources of the system. The physiologic method is widely different from the therapeutics which have preceded it. Its procedures are simple and based upon well established physiologic facts. In principle it recognizes that the physician is not a healer; that the remedies which he applies possess no healing power, but all healing power is in the body itself, and that it is the blood that heals, that as the wise

Dietl said long ago, "The power which creates and maintains must also be able to heal." Recognition of this principle greatly simplifies therapeutics. The physiologic therapeutics, in dealing with a patient, seeks to find out what is wrong with his nutrition, where metabolism is at fault, what morbid condition lies back of functional disturbances or organic changes in vital parts. Then he seeks to so influence nutrition, metabolism, and functional disturbance as to aid the diseased body in the struggle it is alwaysmaking to restore the equilibrium of health.

Fortunately for the therapist the physiologic method supplies measures which are possessed of marvelous potency to influence life processes. The general movement of the blood and its distribution, muscular and nervous excitability, and especially those settled and intimate vital processes which concern blood formation, tissue building, and the various forms of metabolic activity, can be more accurately and more certainly controlled in either direction by physiologic measures than by any other. It is only necessary to recall the wonderful influence of a general cold application, or even a brief cold application to the chest, upon the depth and rythm of the respiration and strength and energy of the heart action. The familiar example of a dash of cold water upon the face of a fainting person affords sufficient proof of this. Cold applications afford one of the best known means of raising blood pressure quickly and safely. The effect is iustantaneous. There is no waiting for the tardy results of absorption, and a response is always secured so long as the nerve centres are intact. Warm applications, on the other hand, afford a means whereby blood pressure, when too high, may be almost instantaneously

lowered to any extent required. Exercises, both active and passive, friction and several of the procedures of massages, may be employed with similar results. Cold compresses or ice bags over the pericardium are more effective measures of stimulating to normal activity a flagging heart than any drug known, and this procedure has the advantage that the effects are immediate and may be reproduced as often as required. The heart responds the thousandth time the application is made just as readily as the first time. Physiologic therapeutics do not lose their effects through the development of tolerance on the part of the body. On the other hand, there is an increase of susceptibility and readiness in response as the result of improvement in the general vital condition.

The resources of the physiologic method are not meagre. They are, in fact, almost infinite in variety. For example, we have about two hundred different hydriatic procedures, each of which is capable of producing effects widely different; in some instances directly opposite, by variations in temperature duration and combination with other measures. Hydrotherapy may be credited with at least a thousand distinct therapeutic applications. Massage adds hundreds more. Medical gymnastics, as perfected by the Swedes, present several hundred more. Electricity has resources by the score little appreciated by those who are unacquainted with the physiologic method. Phototherapy, radiotherapy, mechanotherapy in its various forms meet scores of therapeutic iudications.

The value of the physiologic method has come to be well recognized in the treatment of acute maladies, particularly typhoid fever. Roger, in his great work on "Infectious Diseases," asserts that in combating it preference should be

given to those measures which favor the dissipation of heat, while those that hinder nutritive activity should be avoided. Cold baths offer the best method, since under their influence heat is rapidly dissipated at an increased rate and nutrition is at the same time stimulated. This method may, therefore, be considered as a natural one; it is suggested by the procedure utilized by the organism itself. As Kast, Rovighi, and others have shown, *it is not the elevation of the temperature that is to be combated but simply an exaggerated temperature elevation*. Moderate fever is the method by which the body combats infection, as it stimulates the activity of the leucocytes (as shown by Morel) and increases the germicidal power of the blood. Scientific researches have clearly shown the absurdity of dosing the patient with *antipyrin*, alcohol, *quinine*, or any other so-called antithermic or antipyretic drug. All of these drugs lower the vital activity and lessen the resisting power of the body.

What is true of the drugs mentioned is true of many others. Dr. Billings, President of the American Medical Association, in his address in 1903 at New Orleans, made the assertion, almost without qualification: "Drugs do not cure." Yet many thousands of medical men still plod on in the old beaten paths of artificial therapeutics, dosing their patients with varied drugs and combinations of drugs, regardless of the irrational character of such a course and content that they have abundant authority and precedent for what they do.

But a new day is dawning, and it may almost be said to have dawned. In Germany, at least, under the leadership of von Leyden, Ewald, Ziemssen, Brand, Liebermeister and other progressive men of genius, physiologic medicine has rapidly

won its way to popular favor. Emperor William has honored the method by the weight of his enormous influence. King Edward has had installed in his palaces, Windsor and Buckingham, and with approval of most eminent members of the profession, elaborate appliances for the use of the physiologic method, by the employment of which he has cured himself of gout and chronic appendicitis.

In this country progress is also being made. Thousands of physicians are discarding more and more the routine use of those pernicious hypnotics—the *bromids*, *chloral*, and similar drugs. *Morphia* and *strychnia* are less used than formerly, and the coal tar derivatives are rapidly falling under suspicion of being more potent for mischief than the conditions which they are often to paliate.

Alcohol, which has so long held its own as a reputed panacea for centuries, is at last losing prestige.

The observations and discoveries made at Davos, Switzerland, where the out-of-door and cold-air method of dealing with tuberculosis of the lungs has long been in use, as well as the experience of many acute observers in this country, have shown the superiority of this natural method over all the artificial means which have heretofore been employed to combat this great plague. In dozens of tent-colonies the curability of tuberculosis pulmonalis is to-day being demonstrated in a most convincing way.

What the out-door life does for lung consumption it can do for almost any other chronic disease. It cures by raising the resistance of the organism. The whole body is improved. The whole body is made cleaner, richer, more germicidal; myriads of germ-hungry leucocytes swarm out into the tissues to combat the invading microbes, under the vitalizing influence of the sun-

light, cool air, and good feeding. The addition of hydropathic measures and medical gymnastics completes the physiologic method for these maladies and enormously increases the chances for recovery.

Most chronic maladies are penalties for our artificial life and perverted habits. We have departed too far from natural conditions. We are ignoring, in our eating, drinking, and general conduct great biologic laws which cannot be set aside. The only definite hope for the chronic invalid in most cases is to be found in a return to natural, and hence to wholesome modes of life.

The establishing of natural conditions restores natural functions. The healing forces of the body are encouraged and aided in their contest in its defence. The value of the physiologic method is abundantly attested by the thousands who are benefited yearly by excursions to the seaside and other outings. The cool water of the ocean, the exercise incident to battling with the surf, the tramping in the woods and exposure to the air in camping out and roughing it,—these are only rude and but efficient applications of the physiologic method, which is in fact nothing more than systematic, carefully directed applications to the cure of disease of those forces of nature which are essential to the maintenance of life, and need only to be intensified in their application to become powerful aids to the recovery from disease. Frankel has demonstrated that gymnastics, intelligently applied, may restore to the ataxic patient, who has become nearly helpless, the proper use of each muscular group. The writer has often seen these patients become able to walk so well after a few weeks of training that it was all but impossible to discover any peculiarity of gait.

Diet, hydrotherapy, exercise, light baths and suitable electrical

applications may be relied upon to cure, or at least to make comfortable, almost every one of the vast army of men and women who are suffering from dyspepsia, constipation and other functional gastric disorders. Many of the gastric and intestinal affections which are nowadays being turned over to the surgeon yield readily to a systematic application of rational physiologic methods.

Insomnia, which is only aggravated by hypnotics, is always curable by means of proper hygiene, combined with the neutral bath and other hydropathic and physiologic means.

Obesity, diabetes, gout and chronic rheumatism are well recognized as nutritional disorders, and certainly yield to dietetic and other means which control metabolism, except when structural changes and degenerations have gone too far to be repaired.

Cold air, cold water and light baths are almost as efficient in curing internal tuberculosis as is Finsen's method in conquering the superficial manifestations of this disease in lupus. Tuberculosis is no longer to be considered as an incurable disease except when neglected.

Neurasthenia, a symptom rather than a disease, is really curable only by the application, hygienically and therapeutically, of the principles of the physiologic method.

Cardiac disease, the various forms of Bright's disease, hepatic chlorosis and many other maladies of degeneration, which are, of course, not curable in the proper sense of the term, are nevertheless amenable to the physiologic method to such a degree as to check the advance of the destructive process and enable the patient to live a comfortable and useful life for many years.

The work of treating chronic invalids must not be left for a few

sanitariums. Every city needs a physiologic institute, an institution affording facilities for the application of all physiologic means—hydriatic, electrical, etc.—together with a laboratory for the critical examination of secretions and excretions—microscopically, chemically and bacteriologically—and at the disposal of all physicians who may desire to make use of them.

It is safe to say that of the one million who annually die in this country alone at least half a million might be saved for many years by the application of the physiologic method if made readily accessible to all in the manner suggested. Brand has reduced the mortality of typhoid

fever from twenty per thousand to three, a saving of seventeen, or 600 per cent. The mortality of pneumonia has been reduced by Mays and others in equal proportion. The same methods operate with equal success in other infectious diseases and also in chronic disease. Probably a thorough application of the physiologic system would save at least 700,000 or 800,000 lives in this country annually, and in the world twenty times as many. A better day is dawning. The era of physiologic medicine has come, and in the next ten years marvelous progress will be made in the dissemination of its principles.—*The Lancet-Clinic*. May 6, 1905.



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Editorial.

THE MEDICAL CONFERENCE OF 1907.

In a recent letter from Dr. Christie, he asks the question, Have any arrangements been made for having meetings of our Association during the General Conference? It was voted at the meeting last February that our next meeting should be held in 1907; and the consensus of opinion undoubtedly was that it should be held shortly before the General Conference.

The Committee of Arrangements of the latter have brought forward objections to this plan. They say that having our meeting so soon before will detract from the later one.

Also that the General Conference will detract from ours (a much more plausible suggestion), though that is a matter which troubles us very little, as our proceedings depend more upon the intrinsic than the extrinsic for their value to us and to our work. Yet they tell us that it would be a misfortune to have a general conference of mission workers and not have the medical work represented. Certainly if the General Conference is really desirous of devoting a little of its time to the relationship which, as an integral part of the work, we hold to it, let us elect some one of our veterans who has a silver tongue as well as a skilled hand and let him go into training for the event. But the real cause for anxiety over our plans by the General Committee is the fear of lack of accommodation. Should our medical horde (there are scarcely two hundred of us in all China) swoop down upon Shanghai like locusts of Egypt the last comer will fail to receive the warm welcome that he otherwise would. Personally we believe this last danger to be overestimated in many respects. What we want to know is if the members of the Association endorse the position of our last conference, viz., that the next one should be held shortly before the General Conference, which is to be early in April, 1907.

If this scheme does not meet with your approval, or if you have any better one to suggest, notify the JOURNAL or any member of our Committee of Arrangements—Drs. Davenport, Butchart and Venable—and they will see what can be done about it. In the meantime keep the next medical conference in mind. It is not far off, and we want to make it a record breaker in both members and work.

THE SUMMER ASSOCIATIONS.

The JOURNAL is highly gratified to receive reports from the secretaries of the recently organized sub-branches of the Medical Missionary Association of China—the Fukien Medical Missionary Association, which was actually organized in the summer of 1903 at Ku-liang, the breathing spot in Fukien, and the Kuling Branch of the Medical Missionary Association, organized this summer in that happy mountain valley which holds the same honorable position on the Yangtze Valley that Ku-liang does in Fukien.

The reports will be found under Correspondence.

The Societies hope to hold a series of meetings every summer at their respective resorts, which will be interesting and profitable not only to themselves but to the profession at large. Let the follower of Esculapius who goes annually to these shrines of health, as well as the occasional visitor, keep these organizations in mind and be prepared to do unto others as he would have them do to him and do it first. In other words, may he depart from the usual custom among the members of the profession in China, who not only hide their light under a bushel but also turn the wick down, and may he be ready when the call comes to give of his best for the good of the cause.

THE TRAGEDY OF LIEN-CHOU.

Just as we are going to press comes the shocking news of the massacre at Lien-chou, in Kwangtung Province, of four members of the Presbyterian Mission and the serious injury of two more. The killed are : Rev. and Mrs. Peale, Mrs. Machle and daughter, and Doctor Eleanor Chestnut ; and the seriously wounded are : Miss Patterson and Dr. W. E. Machle. The mission property was also destroyed, including Dr. Machle's and Dr. Chestnut's hospital.

The first report received was in effect that the riot which caused this destruction was started by the interference of the good doctor with a joss procession which was passing his hospital—a statement which was obviously concocted to save some one's face, and has already given place to a second having more of an element of probability in it. According to the later report the trouble began with a remonstrance made by Dr. Machle against the racket of a neighboring theatre and the subsequent removal or closure of the same; the riot following in revenge for the curtailment of universal happiness.

As Dr. Machle is still alive we shall in time learn the truth of the matter, but we cannot but believe that, like most riots of this sort, it might have been stopped before the crime of murder was added to arson if the local officials had acted with promptness and decision. But the awful fact remains that some one has blundered, and there has been a ruthless sacrifice of valuable lives as well as property, and the temporary destruction of an undeniably beneficent work at the hands of an irresponsible rabble.

PUBLICATION FUND.

Contributed for the purpose of publishing medical text-books and other works useful to the advancement of medical education in the Chinese language, to be used under the control of the Publication Committee of the Medical Missionary Association of China:—

Previously reported	...	...	...	...	...	\$1,333.06
Miss Lucy Lees, £5	...	...	...	...	...	50.06
„ Valeria Penrose, £13 5s. 11d.	...	...	...	...	...	135.62
Dr. Fowler, Hiao-kan	...	...	...	...	...	10.00
„ H. G. Barrie, Chang-sha	...	...	...	...	...	5.00
Rev. J. T. McGinnis, Lu-chow-fu	...	...	...	...	...	5.00
Miss Winn, Merion, Pa., £8 4s. 3d.	...	...	...	...	...	82.49
Dr. T. Cochrane, Peking	...	...	...	...	...	10.00
„ T. C. Paterson, Tsou-ping	...	...	...	...	...	10.00
„ A. M. Myers, Shanghai	...	...	...	...	...	10.00
„ M. E. Fitch, Soochow	...	...	...	...	...	10.00
„ A. G. Hearn, Huchow	...	...	...	...	...	10.00
„ Andrew Graham, Ichang	...	...	...	...	...	10.00
„ G. W. Guinness, Kai-feng-fu	...	...	...	...	...	5.00
„ Lucy E. Harris	...	...	...	...	...	10.00
Mrs. Shipley	} Bryn-Mawr, Pa. £2	...	...	...	...	19.75
„ Longstreth						
						\$1,715.98

Hospital Reports.

Since the purpose of the medical missionary is to operate upon the heart of his patients, meantime doing what he can for his body, he simulates, though with many human limitations, the ministry of Jesus the Great Physician. The privilege of such a work and the awful responsibility of lives, physical and spiritual, placed within his sphere, is only matched by the great opportunity. Humanly speaking none are equal to the task, privilege though it be, to thus coöperate with God. We trust He has been uppermost in whatever we have done in our two years of service as the only physicians among 1,700,000 people of the P'ang-chuang field, with a clientele extending far beyond, for patients often come five or six days' journey.

The need of a fully qualified assistant becomes daily more marked. Much that the physicians now do, to the neglect of more thorough medical work and language study, he could do. The Union Medical College, to open in Peking in the fall, with a five years' course, promises relief, provided one or two sufficiently well educated men, who feel called to Christian medical work, can be found; provided the money necessary to pursue such a course is available (for practically no student can furnish this himself); and provided he will be willing to return to P'ang-chuang for the small salary which the hospital will be able to pay.

Patients with eyes and other members ruined for life often come to us for treatment, having first been treated by Chinese "physicians."

Recently one such patient reported that it had been a teacher of the "Jesus Church" who had so treated his eyes, illustrating the advantages of merely claiming foreign training, though the would-be "doctor" had of course had no such advantages. The Chinese are entitled to the best which a rapidly progressive science can give them, both in professional equipment and in medical and surgical supplies. They are our brothers and sisters, and must be treated as such. If in other lauds it takes more money and time to prepare a fully qualified physician than for other professions, the most numerous people on the globe, with their very high death rate, are worthy the same care and outlay. Untrained assistants have their place, but there is so much they cannot and should not do that the missionary physician has to be ubiquitous. If he steps out of doors, he finds a patient at every turn. They must be listened to in many cases, or harm will be done when the patient reports the seeming lack of interest and coldness of the Christian foreigner at his home.

To say that we had 8,972 dispensary patients in 1904 means but little, perhaps, but an average stream of about thirty day by day means many seeds scattered, some of which we have been promised will bear fruit. Our hospital being located in a small village, it is strange that we have so many. There are but about a score of hospitals among China's 4,000,000, with a greater dispensary attendance, and they mostly in large cities. After trying the plan of asking each patient to pay thirty "cash" (one cent) a visit for a

year, and finding it had the desired result of inhibiting those with minor ailments, this year we increased to fifty "cash," and are surprised to find that the number of patients is still increasing. As this amount may be considered an average half day's wage, it is seen that here, as elsewhere, physical ailment demands attention, and is perhaps the more appreciated if paid for at least in part. The number of dispensary patients will likely never rise to the tremendous figures of some past years, as there are now four hospitals in as many mission fields of other denominations bordering ours. In the future we will have to refuse most patients who are not from our own field, as our own garden is large enough to cultivate. Chicago, with one hospital to care for its sick is hardly conceivable, yet that is the situation here; the population of our field being a little less than that of Chicago.

Results are most marked with the in-patients, those who stay in the hospital from several days to several months. Oftentimes several operations are necessary, as in the case of a young Mr. Chang who came to us eighteen months ago not able to walk. Four operations and treatment kept him here a year, and he is now one of our carter's, walking without a limp. Not all cases are successful from the physical standpoint by any means, though the Chinese possess remarkable recuperative powers. Mr. T'ang Yü-shan, of Te-chou, was here many months for eye treatment, and because of his importunity he was operated upon, but in vain. Though he became quite blind, his "heart eyes" were meantime opened. Last fall, already having witnessed a good profession, he gave us the large brass god his family had long worshipped, and has been admitted

to full church membership. A young, pleasing, intelligent man, it has been arranged for him to attend Mr. Murray's school for the blind in Peking. We trust he will be of large service in the future.

A cured patient returning to his home often gets us into trouble. In January patients began to come from Hsien-hsien, a county to the north, distant from us two or three days' journey and about as far from Tientsin, in which mission field that county lies. They had witnessed a cure and came seeking a like blessing. From this one county alone in three months forty-one patients were admitted to the hospital; nearly all eye cases. In many instances their eyes were opened in a double sense.

No charge is made for those who stay in the hospital, except the initial registration fee, but they are urged to make a contribution in proportion to their ability. The contributions of the past year amounted to about \$45.00, but the energy expended in collecting it was considerable, and another plan will doubtless have to be adopted. A man had his cart, the badge of affluence, wait for him some distance from the hospital, and when he was ready to go home recited a pitiful tale of his poverty, displayed his rags and almost shed tears. Though we learned, when too late, that he was rich, we hope he will some time find some Gospel seed springing up in his life. Our patients in many respects are quite like the inmates of some charity hospitals elsewhere. The Chinese have the saying, "All crows between heaven and earth are alike black," but there are white crows, for a poor beggar, taken in and fed a year ago, recently came a half day's journey out of his way to again thank us and bring a present of tea.

The 512 in-patients of 1904 were urged to stay as long as they would

that they might get the more physical and spiritual benefit. They furnish their own food and bedding, so such an arrangement entails no expense except for dressings and medicine. Recently quarters have been much overcrowded; patients sleeping on the floor, on benches, or anywhere. It is hoped that soon the several hospital rooms used by other agencies of the station may revert to the purposes for which the buildings were erected, thus giving more healthful conditions which, with our beds made of adobe brick, can never be too good at the best, however luxurious they are to the Chinese. An isolation ward is highly desirable.

During the year some forty-five from the ranks of the patients have taken the first, second, or third step of entering the church, with more preparing themselves. As Dr. A. H. Smith says, these have in the past shown themselves among the staunchest church members. They have received something without and something within while they tarried here. "They that wait on the Lord shall renew their strength."

The branch dispensary at Tschou, the largest city of our field, has been in operation over a year and has passed the experimental stage. One of the physicians or assistants goes there every two weeks and has a busy day seeing the fifty to 100 patients who come to receive what Christian civilization has for them. This work, having no appropriation, has been carried on with limited funds from outside sources. An extension of this branch dispensary plan would seem to be desirable as soon as men and means are available; the branch dispensaries to be feeders for the central hospital at P'ang-chuang.

Thanks to the generosity of the Lin Ch'ing Mission Station a small fund is available for sadly needed repairs. These have been put off until an-

other year, as time could not be spared at present to oversee details. In one day thirteen operations have been done in the operating room, but its rotten and broken floor and doors and leaky roof call loudly for attention.

A tablet machine has been added to the hospital equipment, and obviates the necessity of importing tablets, as it turns out an excellent article which the Chinese cannot imitate, and is quite a money saver as well. A compound microscope is proving an appreciated addition to equipment.

There having been no medical report for four years it will doubtless be of interest to note that since the establishment of the medical work in 1881 the hospital has given about 300,000 treatments to dispensary patients and performed approximately 12,000 surgical operations. Not many are interested in statistics, but a glance at the constant procession that comes to the hospital will convince any that "the sick you have always with you." They come in small and large carts, drawn by oxen, mules, horses, donkeys, or cows, or a mixture of these; in chairs carried by four men, on beds tied to long poles which rest on the shoulders of four or eight men; in small and large baskets; in creaking wheelbarrows; astride all sorts of beasts of burden; in the arms of tired parents; or slowly and painfully finding their way on foot. Among others comes an abdominal gunshot wound, the bullet proving to be an old brass button; four heel cases in two days; occasionally a case of leprosy; gangrene, half a leg or arm completely mummified or gone; a man minus an ear, the patient having had it bitten off by his loving brother; an earth-eater, who said he preferred earth to food if the dirt was fine and dry; hydrophobia, the patient dying but a few

hours after admission; suicide cases from the eating of opium or matches or drinking kerosene; tumors of all sorts and sizes in all localities; small-pox and other contagious diseases, which the Chinese fear not at all; tuberculosis of almost every part of the human organism, especially of bones; eyes without number with ailments nearly as numerous; dyspepsia and kindred ailments;—many of these traceable to unhygienic surroundings and lack of nourishing food. Perhaps ninety-five per cent. of the patients come later than they should, if not too late.

A woman physician is evidently appreciated; this important phase of the work, both for in and out-patients, being given a great stimulus. The location of the hospital precludes having as many women patients in dispensary or hospital as men, for not only are the heads of the families reluctant to have the women of the household leave their homes and work, but tightly bound feet make it difficult for them to walk more than a few "li." A conveyance is usually out of the question unless a neighbor's animal or cart can be borrowed. At Tschou, with a large population at hand, our dispensary days sometimes find more women than men in attendance.

FRANCIS F. TUCKER.

EMMA BOOSE TUCKER.

Pang-chuang, Te Chou,
via Ts'ing-tao, China.
June, 1905.

As we look back over the work of the past year we have many reasons to

**Summary of Work
at the Ka-shing
Hospital, for the
Year ending June
30th, 1905.**

and we trust it has been more in the direction of quality than of quantity.

There has been an increase in the number of individual patients in the dispensary and in the in-patients, and a large increase (nearly fifty per cent.) in the number of operations done under *chloroform*.

In the dispensary we have registered 11,104 visits, representing 4,852 individual patients.

The total number of in-patients was 133 (100 male and thirty-three female).

In all sixty-three operations were performed under *chloroform* and 445 either with *cocaine* or without an anæsthetic.

In December our oldest assistant had to be operated on for appendicitis. It was a chronic case, and the operation was long and tedious, but he made a rapid and uneventful recovery.

Our two oldest assistants completed their medical course this year and received their diplomas. The graduating exercises were held on May 14th. It was a very happy time for all of us as well as for the two graduates.

For a long time the dispensary has absorbed too large a part of our time, leaving too little time for the in-patients, so we have decided that beginning with September we will open the dispensary only three times a week instead of every day as before.

Every added year of experience in the medical work impresses on our minds more and more deeply the importance of earnest evangelistic work among the in-patients.

Through the conversion of a patient in the hospital two years ago two families have become converted and are giving their children an education in Christian schools. Three of the children are in our girls' school in Hangchow. A young girl, living near these two families, has also become a Christian, and her parents, though not Christians, have agreed not to

betroth her to a heathen, and will probably send her to our school at Hangchow in the fall.

Mr. Hudson or his evangelistic helpers teach the patients in the men's ward and preach daily to the dispensary patients in the waiting-room. There is usually also a Bible woman in the waiting-room to talk to the female patients.

Mrs. Venable and her Bible women have given a large part of their time to teaching the patients in the woman's ward. This work has been most encouraging.

Altogether the work of the past year has been more hopeful and encouraging than in any previous year. In spite of our failures and mistakes we can see that the Lord's hand has been with us, and that His strength has been made perfect in our weakness.

SUMMARY OF A FEW SPECIALLY INTERESTING CASES.

A man had been stabbed in the abdomen. There was a small wound through which a mass of tissue from the interior of the abdominal cavity was protruding. It was swollen and grasped so tightly by the lips of the wound that it was impossible to replace it without first enlarging the wound. This was done under *chloroform*, after the most thorough disinfection, of course, and the wound sewed up. The patient made a perfect recovery.

In contrast to this case was that of a child, five years old, with a foreign body in one of the bronchial tubes. Tracheotomy was performed, but the foreign body was too far down to be reached, and the child died of suffocation six hours after the operation.

One patient came into the hospital in apparently a dying condition. He had some fever and also a swelling in the upper part of the abdomen. After rest and nourishing food he rallied somewhat. Then

the swelling was punctured with a fine needle and found to contain pure blood. It was evidently a case of hemorrhage into the spleen. He begged to be operated on, but it was not a suitable case for operation. He was put on *quinine* and tonics and a nourishing diet and finally recovered.

We had one rather unusual case of elephantiasis. The patient was a woman. The bones of the leg had become softened and absorbed at one point, leaving the leg dangling by the flesh and skin. The useless member was amputated, and she went off rejoicing.

We have had some interesting cases among the higher classes. One lady, about fifty years old, lay quietly on the table, and without the slightest appearance of fright or nervousness, allowed a tumor, as large as a hen's egg, to be removed from the back of her head. *Cocaine* was the only anæsthetic used.

Another lady, belonging to an influential and wealthy family, was in a low state of health and quite a sufferer. She was first visited in her home and afterwards came into the hospital and stayed nearly two months. She made a complete recovery, and she and her little baby, which was born in the hospital, went out in fine health and spirits.

This year, for the first time, we have treated a female patient for the opium habit. Although she had been smoking opium for ten years she had no particular trouble breaking off the habit.

W. H. VENABLE, M.D.
VENIE J. LEE, M.D.

The work of the Kieh-yang hospital for the past year has shown but little variation from that of the preceding year; yet there is always variety in the work of a hospital.

*Kieh-yang
Hospital Report.*

The chief interest to us lies in the moral and religious impression brought to bear upon the patients, and we have been permitted to see some of them undergo the transition from servants of the devil, with all its train of superstitious fear—fear of everything but sin—to a gradual expansion and growth into a knowledge of the truth and the dawning comprehension of God's love. And this has made a year's work, which might otherwise have passed as monotonous, bright with encouragement and hope.

Being crowded into narrow quarters never has an adverse influence upon the temper of the Chinese. Our patients have often to sleep two—not to say three—in a bed, but if they are so fortunate as to have a warm comfort for cold weather and a mosquito net for all times of the year, they are content. A crying baby in a ward containing a dozen to twenty other patients calls forth no comment unless questions are asked as to how the little one rests. Another patient with a foul-smelling disease is quietly endured as one of the conditions of receiving hospital privileges. During the year I have seen many acts of voluntary kindness shown by the patients to one another, which things are rare among the Chinese. A young girl who was in for nearly two months for treatment for a chronic eye trouble, regularly led several old women, who were several degrees blinder than herself, up and down the steps, and waited for her own treatment until they were first attended to. An old man had an operation for cataract and was faithfully waited upon by a younger one whose eyes were half blind and incurable and encouraged by another who was recovering from an operation similar to his own. Three women, all bed patients, were in one small room scarcely

large enough for two. The attendant of one woman was called home, but the sick woman was waited upon voluntarily and cheerfully by the attendants of the other two women, whose attention to their duties was only divided between that and the Gospel tracts they were learning to read. These are only a few of the many instances I might cite. Although no comments are made, I cannot but think it is the Good Samaritan influence creeping in. Among the hospital assistants, too, a growing willingness to serve has been very evident this year. One of the students, whose duty it was to do the surgical dressings, carried a patient as heavy as himself, whose foot had to be dressed, up and down the stairs every morning—otherwise a relative would have to have been on hand, or a coolie would have had to be hired to do such a service. Another student, whose home is near by, has been called more times than I have kept account of, to visit the homes of the poor in the city, both Christian and heathen, to examine and advise at the bed-side. Usually he reports these cases, and sometimes I also visit them with him, but it is wholly charitable work on his part and done cheerfully and as conscientiously for the poor as it would be for the rich. His parents tell me they are afraid he will never make a good doctor; he is too gentle and too much "like a woman." Then I laugh at them, knowing how their hearts are centered in him, and tell them they want to hear me praise him. A small lad with an intractable disease of the scalp, due to neglect, has been a frequenter of our dispensary. It was clearly of no use to give ointment so long as soap and water was a minus quantity; so Sister Plum, our matron, took the lad in hand and regularly, every morning, puts him through the scrubbing and

rubbing process, and with brilliant success. She laughs apologetically for her kindness of heart and says: "Well, he has no father and mother."

These little incidents seem truly too little and detailed to go to make up an annual report, but they indicate more than figures and generalizations the daily life of the Kieh-yang hospital. We have not worked for figures or for renown this year, but, realizing our limitations, have rather thought only of getting along as best we could, trying to relieve pain, and, if possible, to "open the eyes of the blind" to as many as will receive light, while we have waited for the plans to be approved and the Boards to decide and the subscriptions to be in and the glad day to come when we may begin to build a house which will really be adequate to the needs of the work.

It is now about three years since we started the method of having a general cook for the patients and requiring each one to pay 100 cash a day for their meals, and *not* to bring their charcoal and their cooking utensils with them. It met with much opposition in the start, for it was not their "custom," but it is now in such general favor that no one would wish to go back to the old plan. One of its greatest advantages is that we can thus regulate the diet of the patients, which is a very important thing with people who are so prone to over-eat, under-eat, to eat dead or half decayed food rather than see it thrown out, and to eat at any and all hours of the day or night. The beneficial effect shows plainly in the improved condition of those who remain for a length of time in the hospital. Although the sum is so insignificant, there are some who cannot "find" even 100 cash a day for their board, but none who are really in need of treatment are

turned away; a way is always found to provide the amount of their board for them. Although the cook is one of the staff of helpers, his salary is not an expense to the hospital, but comes out of the money paid in by the patients; in other words, the culinary department pays for itself.

One old woman, a cataract patient, between the time of her first hearing the Gospel in the hospital nearly nine years ago and her baptism this fall, has been a constant witness for Christ in many places and to many people, and has been a regular attendant at chapel; her development has been slower than that of another, also a cataract patient, who came to us only last year (1903) and was baptized last spring; but both are equally grateful, and to us who have marked their growth, equally interesting. As I have remarked before, we have learned to expect our women cataract patients to become Christians as a matter of course.

JOSEPHINE M. BIXBY.

It is with some feelings of sorrow that we begin to write this, which will be our *L. M. S. Hospital*, last report from *Wuchang*. The Directors of our Society have requested us to take charge of the Shantung Road Hospital for Chinese in Shanghai, the medical management of which has, for five years at least, reverted to the London Mission. To tear up our roots and begin again is neither pleasant nor easy; and it is only after much prayer and consideration that we have felt it to be God's leading for us.

The Shantung Road Hospital was the scene of the first medical missionary work in China, begun by Dr. Lockhart in November, 1843.

The sphere is much larger, much more complicated and more difficult—a new work in a new dialect. We ask the continued prayers of the many friends who have upheld us in the past that we may be used and blest in still greater measure in the life and service now before us.

We are very glad to report that Dr. Somerville has taken up the Wuchang work before we go. Under his able direction—as soon as he knows the language—it will doubtless be more used and blest than in the past.

It is a great satisfaction to leave the work when it is in a prosperous condition. The past year has been our best. The statistics, the funds, the operations, all show a marked increase. For the first time we have got, or earned, enough to pay our way, apart from the Society's grants. As we have recorded before the foundations of the work were well laid by the late Dr. Mackay. There have been patients in the wards this year from Hunan, who were his friends and who have been faithful to us, largely through his influence. Once having got a name it is easier for those who follow to maintain it.

CHANGES.

Year by year we have noted various developments. This year has seen many of its own. Throughout the city many small temples have been turned into elementary schools. The idols have been put on one side, or removed to a neighbouring temple—the presiding Deity “*nolens volens*.” In one instance thirteen large idols were carried outside the city and publicly burnt. Soon after this occurrence the son of the magistrate who ordered the temple to be stripped, fell dangerously ill and died. Naturally it was said the “spirits” were angry and were avenging the act. During

the lad's illness the poor distracted mother and women of the household bumped their heads black and blue before the family altar to try and appease the wrath of the spirit.

In the case of another temple, situated on our street, its bell and principal idols have been deposited in an old watch house on the city wall; whilst the minor ones were thrown away. One or two came into our possession, little boys ran off with others, while a tender-hearted, reverent idolater placed some in a local shrine with due respect.

We would that it meant “turning from idols to serve the living God.” It means enlightenment, but not necessarily Christianity. It means a unique opportunity for bringing the truth to take the place of superstition.

Education for the children of the poor in the primary schools is nominally compulsory. It is conducted on more or less Western lines and not on the ancient Chinese methods, which are practically acknowledged to be useless. One good feature of the system so far is that opium-smokers are not accepted as teachers.

Our late enlightened governor did a good piece of work by cutting a carriage road over the Serpent Hill. Since his removal, alas! it has been found that the cutting, some twenty-five feet deep through the serpent's back, was causing ill-luck and sickness. The “powers that be” forthwith contracted for its being filled up by a neighbouring dustheap; and so within a week, for the sum of a few hundred taels, the cure was wrought and the road to progress blocked by dust. So old China flounders on!

Some eighty students have entered the medical school near by our hospital. Beginning at the A B C's they hope in years to come to turn out M.D's.

We were called there recently to treat one of the students taken suddenly ill with convulsive fits. His condition was most serious, being black in the face and twisted and toru by terrible muscular spasms. Happily *chloroform* and hypodermic injections relieved him and he made a good recovery.

The normal school located in the old rice granary contains 120 students, so that our street now is constantly filled with uniformed students, many of whom visit the dispensary.

These and similar changes round us all provide "grist for the mill" and create opportunities for preaching and teaching the Gospel of our Lord Christ.

STAFF.

Our staff has continued unchanged through the year. Now at its close, on account of our leaving, Mr. Li has left. For fourteen years we have worked together, and although at times he has not given satisfaction, yet we cannot but record his faithful and helpful service. He has accepted an army appointment, combined with private practice. If he lives true to his Christian principles he might do a great work in his new sphere. Owing to the change of management the staff will have to be further reduced, as there will not be enough work to employ them all whilst Dr. Somerville is studying the language.

STATISTICS.

We make comparison, with regard to numbers and self-support, between our first year in Wuchang and the work of the past eleven months:—

	1897.	1904. (for 11 months.)
Number of in-patients	155	444
Operations ...	78	204
New out-patients ...	2,321	3,850
Old " "	3,062	6,675
Total out-patients,	5,383	10,525

SELF-SUPPORT.

	1897.	1904. (for 11 months.)
Private ward cases	Tls. 97	Tls. 275
Fees ...	" 178	" 128
Out-patient fees ...	" 69	" 316
Donations ...	" 263	" 1,066
Total	Tls. 607	Tls. 1,785

We have had difficulty in finding room for the number of patients who have wished for in-patient treatment. Having come scores, or it may be hundreds of miles, what can you do but find a place on a bamboo couch, or even on the floor? The greatest number sleeping at one time in the hospital has been fifty-six.

The out-patient department too has been overcrowded. Some afternoons we have had as many as 120 patients. This has necessitated Mr. Li and myself seeing them simultaneously. The buildings sadly need pulling down and reconstructing. We trust our successor will shortly be able to do this and so have a commodious, healthy, clean department.

CASES.

An outstanding feature of our work this year has been the number of patients coming in to break off the opium habit. From Shasi alone, a city about 100 miles west, no less than twenty-six scholars and well-to-do men have come to us. They have, as a rule, occupied the private ward. On one occasion a lad of thirteen formed one of the party. He was in the habit of taking one-tenth ounce of opium a day. His mother smoked, and fed him with it and blew its fumes into his throat, so he was "to the manner born." He did well.

Most of these patients had come under Christian instruction through the Swedish Mission at Shasi. Some knew our books and teaching very well.

On another occasion ten soldiers came in a batch to be taken in, to

be cured of opium. It so happened that we were already over-full and not able to take in any of them.

A young lad with disease about the hip, son of a well-to-do Hunan merchant, has been with us most of the year. At first he paid as a private patient, but latterly has been in the general ward. His disease, though not quite well, is considerably better, and his voice may often be heard all over the hospital singing "Jesus loves me" and other hymns. He has had in attendance a servant, who has a position in one of the city yamêns and who can read and write with ease. This servant has been used by some of the hospital staff who are Christians, but unable to write, to copy out Scripture, and other things for them. In this way he has been led to read the Bible and other books, so learning the way of salvation.

As in previous years, numbers of soldiers have come under treatment. The camps look to us to take in their accidents and give treatment to those on sick leave. A military hospital is sadly needed, unless ours can be enlarged to meet the demand. If we could promise hospital treatment to all who need it, I believe the camps would give considerable support. In the past only selected cases have been admitted.

One day a lad of eleven was carried to the hospital by his father and uncle, having come from thirty to forty miles up-country. He was the hope of the family, an only son. He was suffering from hip-disease on the left side, and had suppurating glands on the right. The lad was wasted, weak and ill. The uncle having some lung trouble, came in with the lad for treatment as well.

The result was better than we had hoped, and by God's blessing the lad was restored to his parents in comparatively robust health.

ENDOWED COTS.

Again we have to thank the kind and generous friends who have made it possible to feed and treat many indigent cases.

In April a young man, aged twenty-nine, crawled into hospital with both his feet badly frost-bitten and gangrenous. The extent of the disease necessitated amputation of both legs below the knees. The patient did very well, and in a few months was strong and well. During the summer he was used as punkah-puller. He had previously occupied a good position, but lived the life of a prodigal, so that his parents refused to help or acknowledge him. After having saved him so far we were loath to turn him out on the streets to beg, and for many weeks sought in vain to get him any employment. At length one of our church members, a silversmith, agreed to give him a trial in his shop. So in due time we had the satisfaction of seeing him walk out of the hospital with a well fitted trough-boot fitted on either knee.

In the case of another lad, who has been in the hospital on and off for two years, suffering from severe ulceration of the legs, we have just been able to set him up in the boot shop. Another man with tubercular ulceration of thigh bone is still with us after some months of treatment.

We feel confident that the time and money spent on such-like cases, helping the needy, raising the fallen, will not have been spent in vain.

CECIL DAVENPORT.

Correspondence.

KULING, September 1st, 1905.

DEAR MR. EDITOR: You will be

**The Kuling
Organization.**

interested to learn that after several years of informal weekly medical meetings among the medical missionaries who are privileged to visit Kuling, a permanent organization has now been formed to be known as the Kuling Branch of the Medical Missionary Association. The need for such an Association has been felt yearly, but formal organization was not effected till near the close of the present season. The constitution was adopted August 22nd, and the following officers elected to serve for one year:—President, O. T. Logan; vice-president, Miss Ruth Massey; treasurer, Jas. Butchart; hon. secretary, A. Tatchell. The first ordinary meeting was held Tuesday, August 29th, and although the season was somewhat advanced twelve members were present, out of a total membership of twenty.

The first topic was a consideration of Wright's blood stain, and a comparison of the same with Reishmann's, by Dr. Barrie. Several slides of malarial and leukæmic blood specimens, which were kindly loaned by Dr. Taylor, were used to illustrate the advantages of the stain.

Dr. Cochran introduced a discussion regarding the desirability of possessing a well defined *modus operandi* for the guidance of members of the Association when attending contagious and infectious cases on the hill. The attention of the Association was also directed to the fact that at present there was a totally inadequate stock of disinfectants at the dispensaries. A general discussion followed,

which resulted in the formation of a sanitary committee. The committee was instructed: 1. To frame a suitable code of regulations for the guidance of members attending contagious cases, especially those where opposition was met with in attempting to carry out proper sanitary supervision. 2. To request the Kuling Council to purchase a supply of disinfectants and erect or purchase a furnace suitable for the cremation of dangerous discharges. 3. To work toward the formation of a thoroughly efficient code of sanitary regulations which will have the moral force of the Association behind it for its enforcement. The meeting, after prayer, adjourned until July 3rd (D. V.), 1906.

The informal gatherings held during the present season, before organization was effected, created much greater interest than the meetings of any previous year. Not only has attendance been larger, but the topics presented and the discussions which they have elicited have been most helpful and of a practical nature. Among the papers were the following:—A Survey of Some of the Latest Devices in Hæmatology, by Dr. Taylor; Relapsing Fever, Dr. Jas. Woods; Trypanosomiasis, Dr. Leyton (quoted from personal experiences in the Congo region). Dr. Logan gave a statement of his discovery of the *Schistosomum Japonicum*, being the first case recorded in China. So far as is known Dr. Logan is the second observer to report it in the Far East. A microscopical specimen and several original drawings of the fluke were exhibited.

HOWARD G. BARRIE,

Hon. Secretary, 1905.

FOOCHOW, September 8th, 1905.

DEAR DR. LINCOLN: Have neglected to report to you in regard to the organization of our Fukien Medical Missionary Association.

For several years the physicians who spend the summer vacation on Kuliang have held meetings. For a few years we had what we called a "Medical Breakfast" at 8.30 a.m., and discussed interesting cases and questions pertaining to our work, after the meal was over. We once heard these referred to by the laity as "the medical eat." Of course the important part to us was not the social function (although we enjoyed that) but the learned discussions which followed.

At the meeting held at Kuliang July 17th, 1903, the subject of having a definite organization was discussed. The result was that a committee was appointed to prepare a constitution.

This constitution was adopted at a meeting held at Kuliang, August 24th, 1903. The following officers were elected:—President, Dr. Henry Whitney; vice-president, Dr. G. Wilkinson; secretary and treasurer, Dr. Kate C. Woodhull; executive committee, Dr. Ellen Lyou, Dr. J. E. Skinner, Dr. H. Kinnear.

During the summer of 1904 we were able to have but one meeting. There were twelve present. The subjects discussed were sprue, dysentery, training of medical students, skin grafting.

This summer we have had two meetings. Sixteen were present at the first and eighteen at the second. The subjects discussed were:—Plans for hospital buildings, the best places for buying drugs, surgical instruments, etc., the training of medical students, the training of nurses, the best plan for keeping on hand a supply of diphtheritic

serum. Interesting cases were also reported and discussed. The officers first elected have been re-elected each year.

I think we are all ready to testify that we have found these meetings very profitable.

Yours sincerely,

KATE C. WOODHULL.

EN ROUTE HANKOW, }
Aug. 30, 1905. }

DEAR DOCTOR LINCOLN: We have had some good meetings at Kuling.

Schistosomum Japonicum. Dr. Taylor led off with a good talk on the blood, Dr.

Cochran followed by a talk on "Vesical Calculi," then Dr. Woods gave a talk on "Relapsing Fever," of which he had personally suffered only recently. During Dr. Wood's evening I had the pleasure of showing the egg of our Hunan specimen of the *Schistosomum Japonicum* (Cattoi?) Next Dr. Leyton, recently of Africa, told us about the "Sleeping Sickness." Dr. Leyton had charge of (in the early stages) the first foreigner ever known to have taken this disease. The last meeting of the season was to have been held yesterday evening and was to be given mainly to the exhibition of Dr. Taylor's microscopic slides, with particular reference to the value of Wright's stain, for blood specimens.

At the meeting of August 22nd there was organized "The Kuling Branch of the China Medical Missionary Association," which is to meet in July and August of each year, the object being to discuss medical subjects, promote fellowship and to deal with sanitary problems at Kuling. Incidentally it is hoped that the papers will furnish some interesting material for the JOURNAL.

Heretofore the talks have been informal and were not available for

publication, but now the brethren will be expected to put their thoughts on paper. I trust this Society will help furnish material that will both lighten your cares and make the JOURNAL more valuable. You have a hard job, evidently, keeping us medical missionaries in line, but you must not become discouraged, for I am sure you will get a large measure of success if you keep plodding away and *prodding* away.

I am sending you a translation of Prof. Katsurada's letter, in answer to mine to him, regarding the blood fluke. If it is too late for the September JOURNAL, perhaps you can use it some other time.

Yours sincerely,

O. T. LOGAN.

OKAYAMA, JAPAN, }
10th July, 1905. }

DEAR DOCTOR LOGAN: I thank you for the letter of June 17th, and also for an exact description of that interesting patient. The eggs that you have observed, passed by eighteen-year old patient, are surely the eggs of the *Schistosomum Japonicum*.

I am very glad that through your careful observation our *S. Japonicum* is found in China. I am of the opinion that the *S. Japonicum* is of the same species as the one Catto observed in a Chinese. I am sorry that Catto's description [referring, no doubt, to the description of the eggs in the faeces; since, in other respects, Catto's description was most admirable and clear.—O. T. L.] was not clear.

With fraternal greetings,

Yours truly,

F. KATSURADA.

October 11th, 1905.

DEAR DOCTOR LINCOLN: I have recently heard from Dr. Stiles, of Washington, who confirms my diagnosis, adding the interesting information that the *Schistosoma Japonicum* and the *S. Cattoi* are the same. That there are three foci of

the disease caused by this parasite is now settled. These three foci are: Japan, Fukien province and our prefecture. A few days ago I found another case that is much more acute than the one I have reported. The disease in this case has lasted only nine months, but the patient is much more profoundly affected, being bloated and profoundly anemic, but without any liver or spleen enlargement. The patient is also a fisherman.

Yours sincerely,

O. T. LOGAN.

ST. LUKE'S HOSPITAL, }
English Church Mission, }
CHEMULPO, KOREA. }

DEAR DOCTOR LINCOLN: In the May number of the JOURNAL is an account of the *Schistosoma Cattoi*, which mentions that the ova of this parasite have probably often been found before.

Shortly before Dr. Catto's article in the *B. M. J.* reached me, I found, in examining faeces from an obscure case, a number of bodies which at once struck me as being like minute *Bilharzia* ova without spines. On comparing them with the pictures in his article when it arrived the likeness was still more striking, except that they appeared smaller than he describes, about half the size of the average *ankylostomium* ovum. I have sent films home in hopes that they may be compared with his specimens, but have as yet had no answer.

Since then I have found the same bodies in two similar cases, and report the matter in the hopes that if such cases exist outside Korea others may be on the lookout for these ova in case they have any causal connection.

The cases referred to in some ways resemble beri-beri, and I believe that some in this country

consider them to be examples of this disease. My cases have, however, had knee jerks, no paralysis or heart symptoms. There is œdema of the legs and genitals, when severe slightly of the face, the abdomen is very distended, but I have not been able to detect free fluid, the whole being very tympanitic, even in the flanks. The urine has been normal, and I could not detect any visceral lesion in chest or abdomen.

Such cases are fairly common in Korea and have been regarded as due to *ankylostoma duodenale*, as well as to *beri-beri*. In my cases, however, there has been little or no

anæmia, and though the ova of this parasite has been found it has been scanty compared to the ones I mention. In at least one case of *ankylostoma* anæmia at present in hospital, and now very œdematous, no such ova can be found.

In the present state of my observations there can be nothing further than suggestion of possibilities, but it is notable that the symptoms are such as might be expected from a parasite occupying the vessels of the large intestine.

Yours truly,

HUGH H. WEIR.

Personal Record.

BIRTHS.

- At Lu-chow-fu, Ngan-hwui Province, in August, a son to Dr. and Mrs. JAMES BUTCHART, of the Foreign Christian Missionary Society.
- At Pei-tai-ho, August 17th, to Drs. FRANCIS and EMMA B. TUCKER, of the A. B. C. F. M., Pang-chuang, a son (William Boose).
-

MARRIAGES.

- At Shanghai, September 22nd, Dr. G. WHITFIELD GUINNESS, to Miss JANE AF SANDEBURG, both of the C. I. M.
- At Kien-ning, Fuh-kien, October 10th, HERBERT MELVILLE CHURCHILL, M.R.C.S., L.R.C.P., of the C. M. S., to GERTRUDE ELIZABETH, eldest daughter of A. O. Aldwinckle, London, England.
-

DEATH.

- At Yo-chow, Hunan, September 21st, of illio-colitis, WILLIAM HILL KELLY, son of Dr. and Mrs. William Kelly, of the Cumberland Presbyterian Mission, aged thirteen months.
-

ARRIVALS.

- At Shanghai, September 3rd, Dr. E. L. WOODWARD, American Church Mission, Ngankin (returning).
- September 20th, Miss C. S. MERVIN, M.D., and Dr. F. FONTS and wife, of A. P. M., for Shantung.
- Dr. MARCUS L. TAFT and wife, M. E. M., Tientsin.
- Miss M. R. OGDEN (trained nurse), A. C. M., Hankow.
- Miss M. L. HILL (trained nurse), A. C. M., Shanghai.
- September 24th, Dr. W. H. JEFFERYS and family, A. C. M., Shanghai (returning).
- October 25th, Miss BENDER (trained nurse), A. C. M., Shanghai.
-

DEPARTURES.

- From Shanghai, September 18th, Dr. H. G. BARRIE, C. I. M., for Toronto, Canada.
- September 22nd, E. A. PEAKE, M.B., C.M., wife and child, L. M. S., for England.
- R. T. BOOTH, M.B., B.Ch., of the W. M. S., Hankow, for Ireland.
- October 9th, T. GILLISON, M.B., C.M., of the L. M. S., Hankow, for England.

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Contents of No. 1. January, 1906.

ORIGINAL COMMUNICATIONS :—

	Page
Some Interesting Obstetric Cases By James Menzies.	1
Wright's Modification of Leishmann's Blood Stain } By Howard G. Barrie.	6
The Museum By James L. Maxwell.	8
Two Interesting Abdominal Cases.... By J. Preston Maxwell.	10
Ligature of the Common Femoral By Cecil J. Davenport.	14
Resection of over Three Feet of } Small Intestine : Recovery } By J. H. McCartney.	15
Divine Healing By John A. Anderson.	17

MEDICAL AND SURGICAL PROGRESS :—

Pathology and Bacteriology....	26
Hygiene, Hydrotherapy and Physiologic Medication	27
Surgical	34
Tumour of the Nose By James L. Maxwell.	36

EDITORIAL :—

"Divine Healing"	37
The Medical Conference of 1907	41
Statistics	42
Publication Fund	43

HOSPITAL REPORTS :—

Roberts' Memorial Hospital, T'sang-chow	44
Warren Memorial Hospital, Hwang-hien, Shantung	47
Opening of New Hospital, Tai-chow	49
Men's Hospital at Lien-chow	50

CORRESPONDENCE....	51
--------------------	----

PERSONAL RECORD :—

Birth, Marriage, Death, Arrivals, and Departures	52
---	----

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NOTICES.

The Subscription Price for *The China Medical Missionary Journal* is Three Dollars a year. There are to be six numbers in each volume.

We will be obliged to our friends for an early transmission of the subscription money, as we have no reserve funds with which to meet our printers' bills. SUBSCRIPTIONS should be forwarded to the PRESBYTERIAN MISSION PRESS, Shanghai.

Articles intended for *The China Medical Missionary Journal* should be sent to the Editors, who solicit contributions from all Medical Practitioners in China, Corea, Japan, Siam, or elsewhere.

INDICES

TO

The China Medical Missionary Journal.

Vol. XX, 1906.

INDEX I. GENERAL.

Acute Non-Suppurative Inflammation of the Liver	ORIGINAL.	249
Address to Women Medical Graduates, Women's Medical College, Canton, 1905	„	61
American Baptist Mission, Swatow ...	HOSPITAL REPORT.	93
Annual Report of the L. M. S. Men's Hospital, 1905	„ „	187
Appreciation, An	CORRESPONDENCE.	102
Births, Marriages, Deaths, Arrivals, and Departures	... .. 52, 192, 275	
Book Review ... ..	... ..	184
B. M. S. Medical Mission Hospital Report, 1905	... ..	230
Catalogue of St. John's College, 1906-1907	... ..	190
C. C. M. A. Report for 1905	CORRESPONDENCE.	101
C. C. M. A. Programme 1906	„	102
C. C. M. A., The	EDITORIAL.	92
Ch'ang-li Medical Work	HOSPITAL REPORT.	146
China Centenary Missionary Conference	EDITORIAL.	183
Chunking Men's Hospital Report, 1905	... ..	187
Church of Scotland, Ichang	HOSPITAL REPORT.	97
C. M. S. Hangchow Medical Mission Report, 1905	... ..	230
C. M. S. Ningpo Mission Hospital Report, 1905	... ..	231
Coming Conference, The	EDITORIAL.	181
Coming Meeting of the China Medical Missionary Association, The	„	219
Conference for 1907	CORRESPONDENCE.	103
Correspondence ... ..	... 51, 191, 233, 272	
David Gregg Hospital for Women and Children, Canton	... ..	271

"Divine Healing"	EDITORIAL.	37
Divine Healing	ORIGINAL.	17, 53
E. A. K. Hackett Medical College for Women, Canton }	... ..	271
Eng-chhun Hospital	HOSPITAL REPORT.	143
Ether by the Drop Method	ORIGINAL.	114
Fifty-ninth Annual Report of the Chi- nese Hospital (Shantung Road), }	... ..	231
Shanghai, 1905 }		
"Freely Ye Have Received!"	ORIGINAL.	105
"From our Chinese Medical Portfolio"	"	206
Hakka Work in South China	HOSPITAL REPORT.	186
Health Department, Shanghai, 1905 ...	" "	185
Hiao-kan Medical Mission Report, 1905	... ..	187
Hospital Plans	CORRESPONDENCE.	151
Huchow, Chekiang	HOSPITAL REPORT.	150
Hygiene in China	ORIGINAL.	235
In Consultation	"	158
Iu Consultation	EDITORIAL.	181
In Consultation ... ..	... ..	260
Inflammation of the Antrum	ORIGINAL.	162
Interesting Case of Tumor	"	120
Leather Splints for use in Cases of Caries of the Spine in the Dorsal }	"	77
or Lumbar Regions }		
Ligature of the Common Femoral	"	14
London Mission Medical School, Han- kow. Report for 1905 }	... ..	186
London Mission Woman's Hospital, }	... ..	188
Peking. Annual Report, 1905 }		
Luff's Chemistry	ORIGINAL.	79
Manual of Nursing	BOOK REVIEW.	86
Margaret Eliza Nast Memorial Hospital	ORIGINAL.	157
Medical and Surgical Notes	"	70
" Books ... ..	... ..	218
" Conference of 1907	EDITORIAL.	41
" Missions in Canton	HOSPITAL REPORT.	149
" Missionary Society in China ... ..	... ..	190
" Work at Ichow-fu	HOSPITAL REPORT.	142
" " " Shantung	" "	142
" Degrees in China	EDITORIAL.	179
Men's Hospital at Lien-chow	HOSPITAL REPORT.	50

Mrs. Charles P. Turner School for Nurses, Canton. }	... ..	271
Museum, The	ORIGINAL.	8
Native Methods of Medical Practice ...	EDITORIAL.	139
New Methodist Hospital at Yen-ping, Fuhkien, The }	... ..	211
New Union Medical College in Peking, The ... ..	... ..	122
New Weuchow Hospital, The	ORIGINAL.	116
Nomination of Officers for 1907-8-9 ...	EDITORIAL.	264
Not Merely an "American Fraud" ...	..	89
Opening of New Hospital at Tai-chow...	HOSPITAL REPORT.	49
"Opium in the Orient" ... ..	... ..	87
Opsonic Index of Blood, The. Medical and Surgical Progress }	... ..	131
Pedunculated Fibroid, A.	ORIGINAL.	156
Peking Medical Work	HOSPITAL REPORT.	148
Pigmentation of Nose, Cheeks, Ears, Hands and Feet }	ORIGINAL.	127
Preliminary Annoucement of Boone Medical School }	... ..	190
Pressure of Work	EDITORIAL.	178
Progress, Medical, During 1905... ..		129
.. .. { IN CHARGE OF JAS. L. MAXWELL, M.D. }	26, 81, 132, 174, 217, 262.	
.. .. { IN CHARGE OF KATE C. WOOD-HULL, M.D. }	... ..	27, 213
.. Surgical { IN CHARGE OF J. PRESTON MAXWELL, M.D. }	... ..	34, 83, 173
Prospectus of the Union Medical College, Peking, 1906-1907 }	... ..	229
Publication Fund	EDITORIAL.	43, 92, 140
Quinine in Cholera	ORIGINAL.	153
Recent Riots at Chang-pu, S. Fukien ...	CORRESPONDENCE.	151
Report of the Eng-chhün Hospital, 1905-1906 ... ..	... ..	268
Report of the Lao-ling Medical Mission, 1905 ... ..	... ..	269
Report of the London Mission Men's Hospital, Wuchang }	... ..	271
Report of the L. M. S. Margaret Hospital, 1905 }	... ..	187
Report of the Tsing-kiang-pu Hospital for 1905 }	... ..	189

Report of the Tung-kun Medical Missionary Hospitals, 1905	...	...	...	...	229
Report of Conferences	...	...	...	...	256
Resection of Over Three Feet of Small Intestine : Recovery	ORIGINAL.				15
Review of a Paper by H. Brockman Wilkinson, M.D., "Leprosy in the Philippines, with an Account of Its Treatment with the X-ray"	ORIGINAL				254
Riot at Chang-pu, The	EDITORIAL.				88
Roberts' Memorial Hospital, Ts'ang-chow	HOSPITAL REPORT.				44
Rolls, The	EDITORIAL.				87
Service of Daily Prayer for Workers in Mission Hospitals, A	ORIGINAL.				163
Signed Editorial	...	...	...	...	226, 266
Some Emergencies of Surgery	ORIGINAL.				241
Some Interesting Obstetrical Cases	"				1
Statistics	EDITORIAL.				42
Statistics for 1905	"				139
Three Head Cases...	ORIGINAL.				126
To the Association	EDITORIAL.				158
Treasurer's Report, The	"				91
Treatment of Mad Dog Bite	ORIGINAL.				209
Tumour of Nose	JAS. L. MAXWELL.				36
Two Interesting Abdominal Cases	ORIGINAL.				10
Undescribed Form of Ascaris and its Egg, An ; Is it a New Species?	"				193
Various Forms of Facial Neuralgia, The; their Diagnosis and Treatment	"				199
Warren Memorial Hospital, Hwang-hien, Shantung	HOSPITAL REPORT.				47
White Feather, The	EDITORIAL.				222
Work of the Publication Committee, The	"				220
World's Anatomist, The	BOOK REVIEW.				141
Wright's Modification of Leishmann's Blood Stain	ORIGINAL.				6

INDEX II. AUTHORS.

ANDERSON, JOHN A.	
Divine Healing	17
Do.	53
BARRIE, HOWARD G.	
Wright's Modification of Leishmann's Blood Stain	6

BOOTH, R. G.	
Medical and Surgical Notes	70
BETOW, EMMA J.	
Margaret Eliza Nast Memorial Hospital	157
CORMACK, J. G.	
" Treatment of Mad Dog Bite "	209
DAVENPORT, CECIL J.	
Ligature of the Common Femoral	14
Some Emergencies of Surgery	241
HUNTLEY, GEORGE A.	
Interesting Case of Tumor	120
JEFFERYS, W. H.	
" Freely ye have received ! "	103
A Pedunculated Fibroid	156
KEELER, J. L.	
Three Head Cases	126
LOGAN, O. T.	
Ether by the Drop Method	114
An Undescribed Form of Ascaris and its Egg. Is it a new Species?	193
Review of a Paper by H. Brookman Wilkinson, M.D. " Leprosy in the Philippines with an Account of its Treatment with the X-ray "	254
MAXWELL, JAS. L.	
The Museum	8
Tumour of the Nose	36
Acute Non-suppurative Inflammation of the Liver	249
MAXWELL, J. PRESTON.	
Two Interesting Abdominal Cases	10
MCCARTNEY, J. H.	
Resection of over Three Feet of Small Intestine : Recovery	15
MENZIES, JAMES.	
Some Interesting Obstetrical Cases	1
PHILL, ERNEST. J.	
The New Union Medical College in Peking	122
PLUMMER, W. E.	
Leather Splint for use in cases of Caries of Spine in the Dorsal and Lumbar Regions	77
Pigmentation of Nose, Cheeks, Ears, Hands, and Feet	127
Inflammation of the Antrum	162
STANLEY, ARTHUR.	
Hygiene in China	235
SITES, C. M. LACEY.	
The New Methodist Hospital at Yen-ping, Fuh-kien	211
STUART, GEORGE A.	
Luff's Chemistry (name in Chinese)	79
TACHELL, REV. W. ARTHUR.	
The Various Forms of Facial Neuralgia : Their Diagnosis and Treatment...	199
USSHER, REV. CLARENCE D.	
Quinine in Cholera	153
WOODS, ANDREW H.	
Address to Women Medical Graduates, Women's Medical College, Canton, 1905	61
Z.	
In Consultation...	158
A Service of Daily Prayer for Workers in Mission Hospitals...	163

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Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

SOME INTERESTING OBSTETRIC CASES.

By JAMES MENZIES, M.D., Huai-ching, N. Honan.

If the history of the following cases be of any help to medical missionaries in China, the help is freely given. Should it suggest any better plan of treatment, may that be just as freely given.

Medical work at Huai-ching is a little over a year old, and during that time, as in fact during a good part of the past ten years, my time has largely been devoted to building, with a little medical work thrown in here and there.

The few cases of midwifery that fell to my lot were all normal or nearly so, and I always prayed that no very serious case might be left to my skill. I have, however, looked pretty frequently into "Herman's Difficult Labor," and the past few months have shown that if we are to develop a midwifery practice in China we had better be prepared to attend all sorts of abnormal cases, for the normal cases will take care of themselves.

Case No. 1.—On February 25th was called to attend the wife of a young official. Patient was a primipara of twenty-six years, who had been six or eight days in labor. I found her pulseless and cold, and held in sitting posture by one of the women. The abdomen was very much distended, and as I failed to make out by palpation the form of the child, thought at first it was a case of tumor. Examination, however, showed head-presenting in brim. For two days there had been no uterine contractions, and the bladder, which was very much distended,

had not been relieved for four days. I tried to pass a catheter, but failed entirely, owing to the pressure of the head and the swelling of the soft parts. As the child had evidently been dead for some time, the head having been pretty roughly used by the midwife in attendance, decided to perforate, which was done with a protected scalpel. After removing part of the brain forceps were applied, and without any great difficulty the child was delivered. The greatly distended bladder was also relieved. Stimulants and a full dose of *ergot* were then given, and the patient was allowed to rest for a little. On attempting to sever the cord, the old lady, who looked upon me as a very poor kind of assistant, promptly interfered, saying: "Don't you know that if you sever the cord the placenta will never come down?" To please her it was left intact, but as she persisted with very dirty hands (from which she did not take the trouble to remove a large jade ring) in pawing where she had no business to, and especially as when the rotten cord was accidentally broken, she made several remarks about me that were particularly uncomplimentary, she was gently but effectually cleared out. The uterus showing no sign of contracting under manipulation, the hand was inserted to the fundus and the placenta brought down, and I had the satisfaction of feeling the uterus firmly contracting behind the placenta as it was removed. Patient was seen for several days after and vagina cleansed by antiseptic douche. She made a good recovery.

Case No. 2.—Was called at midnight to attend a patient in the hospital who was threatened with miscarriage. She was suffering very severely from dysentery, and as she was seven months' pregnant precautions against miscarriage had been taken. An attack of temper, however, brought things to a climax. I arrived in time to see her standing beside the bed, holding the child in her hands and the placenta banging from it by the cord. The child lived only a few hours, and the mother was soon well.

Case No. 3.—Was called in the morning to attend a Mohammedan woman with her third child. Was told "she had been in labor since midnight, and that an arm was presenting." Found on arrival an arm presenting with a vengeance; it was lying on the ground beneath the bed and had been torn off at midnight. Found also on enquiry that "patient was a month beyond her time and that she had already been four days in labor, also that the child could not be born because it was lying crosswise." The abdomen was much distended with gas and the fluid escaping was very foul-smelling. The patient had considerable

strength left, and unfortunately so had the midwives, of whom there were no less than six. One kind old soul kept mopping the perspiration from my face with a cloth that—well, it mopped the perspiration off anyway, but the others did about all they could to hinder me and make things unpleasant. The husband, who was suffering from a mule-kick, stood outside the door and encouraged me by shouting, "Don't mind them, doctor; they don't know anything; do just what you think best." Tried to perform a version, but the shoulder had been pulled so far down into pelvis before the arm gave way, and the uterus was contracted so tightly on body of child, that I failed. Next tried to reach and bring down a leg, but failed in this also, but succeeded in getting well saturated with the liquid contents of uterus driven out by pressure of gas. As shoulder and ribs of right side were the only parts reachable decided to disembowel the child, and lacking a better instrument had to use the hook belonging to the midwives (an abomination calculated to do as much damage as possible to the hands of the operator, whatever good it might do the patient). It or some other instrument had been freely used before, as the vagina was badly bruised and torn. After considerable difficulty delivered the child and later on placenta, the uterus contracting all right, whether as result of *ergol* given or not some one else must decide. The vagina was thoroughly irrigated with corrosive solution, 1 in 3,000 or so. *Quinine* was also given and a hypodermic of *strychnine*, as the heart action was weak. After the midwives had tried to take back the ugly things they had said, they were persuaded, much against their wills, to let the patient lie down and sleep. Saw patient next day and washed out vagina with corrosive solution as it seemed impossible to avoid septicæmia. There was some fever, so gave *quinine*, as malaria was more than suspected. On the following day repeated same treatment, and the next day was asked not to trouble going to see the patient as she was much better. I did not see her again, but on the sixth day the husband gleefully reported: "My wife is all right now; she is up and about and taking food well, but there are a lot of very mad old women around there yet."

Case No. 4.—Case of prolonged labor; arm presenting (as before, under the bed). Midwives decided that as I was not a woman doctor I could not see the patient, so could do nothing.

Case No. 5.—Patient a foreign lady, primipara of twenty-two. Labor pains began at 3.30 a.m. on Wednesday, September 3rd, and kept up regularly, increasing in strength and frequency. Previous examination had made out the presentation to be R. O. A., and no anxiety was felt, as patient was well and strong and seemingly well-formed. At

10 p.m. I was called, and remained with patient till the end. Uterine contractions were then quite strong and regular, but had not accomplished very much, though they were very painful. It seemed to me as though the circular fibres of the uterus were contracting strongly, but the longitudinal fibres seemed inert. While the body of the uterus was contracted very hard during each pain the cervix seemed to be little on the stretch. Between pains, too, the uterus never seemed to fully relax, but was always in a semi-tonic condition of contraction. The head could be distinctly felt, but there was no bag of waters to help dilation of cervix. In the morning, as patient had had no sleep for over twenty-four hours, and as os was still very slowly dilating, gave 20 grains of *chloral* and $\frac{1}{4}$ grain of *morphia*. This secured for patient an hour's broken sleep, and the *chloral* had the effect of dilating the os. At 4 p.m., the os being pretty well dilated, I ruptured the membranes, when less than an ounce of fluid escaped. Pains were now recurring every two minutes and very strong, but head made little or no advance. About 6 p.m. gave *chloroform*, but not enough to put patient under. At 8 p.m., as no advance was being made, and patient was showing signs of exhaustion, and as there was danger from rupture of the uterus, which was now in a state of tonic contraction, I put the patient under *chloroform* and applied forceps. Had considerable difficulty in locking the forceps, but succeeded at length and attempted delivery, in which I failed utterly, the forceps, after a time, pulling over the head. As patient's condition forbade any further delay, decided to perforate, which was done with scissors, and after removing part of the brain with blunt hook succeeded in delivering the head, but had still great difficulty in delivering the shoulders. The child was a very fine boy; weight, ten pounds. As was to be expected, hæmorrhage followed, very profuse, and as uterus showed no signs of contracting, the placenta, which was already partially detached, was delivered with the hand and the uterus grasped to control the bleeding, which was terrible. *Ergot* in double doses had been given, as also *quinine*, but neither had any effect on the exhausted uterus. With the hand cleared the uterus of blood clots and shreds of membrane, but still it would not contract. Kneading and grasping in the hand alike proved futile. A douche of hot water also failed. Sometimes we would get a fairly good contraction, but only for a little while; it soon became flabby again and that terrible hæmorrhage still kept up. At midnight patient was quite pulseless, extremities were cold, lips bloodless and patient faint. Gave brandy and *strychnia* and applied hot water bottles. A strip of gauze soaked in vinegar, inserted high up with long forceps, seemed to have more

effect than anything else in stopping the bleeding and in bringing about contraction. Till 3 a.m. we prayed and fought against that hæmorrhage, and with stimulants tried to keep the little life left still burning. By this time, as uterus seemed inclined to stay contracted, a binder was put on. Patient was very weak and faint, but responded to stimulants. We would have injected *saline* solution, but had no apparatus ready, and with only my wife to help me had no time to prepare either apparatus or solution.

Patient was given bovril, broths or gruel every two hours the first day and every three hours the next three or four days with all the water she wanted. There was a bad tear of the perineum, involving the sphincter ani, but her weak condition forbade any attempt at stitching. As septicæmia was very much feared, no precaution was neglected. An enema of boiled water was given daily and a vaginal douche of boiled water and corrosive sublimate twice a day, the syringe being boiled each time before being used. On third and fourth days there was considerable fever with very profuse perspiration, temperature rising to $103\frac{1}{2}$; this was evidently malarial, as it submitted to *quinine*. As the perspiration made patient very uncomfortable, the night-gown was dispensed with for a while, thus making it much easier to keep her dry and comfortable. The intense urticaria was relieved by Fuller's earth, freely rubbed in with the hand. At date of writing, the eighteenth day, patient is sitting up in bed and almost ready to leave it. The injury to perineum that was to receive attention later has healed perfectly. Digital examination per rectum shows perfect union and sphincter acting normally.

Case No. 6.—This was a case of abortion at four months. The accident had occurred twenty-four hours earlier, but the placenta had not come away and severe hæmorrhage followed. After I was called first, it took the friends of the patient fifteen hours to decide to let me see the patient. Found her conscious, but without the slightest pulse, either in wrist or carotids; the entire body quite cold and the placenta still undelivered. Bleeding had ceased, because there was no blood left to bleed evidently. Gave double hypodermic dose of *strychnine* and brandy by the mouth, and applied several hot bricks wrapped in anything we could find to the body. After a while, as there seemed a little improvement, *ergot* was given, and the placenta was removed with the hand, coming away very gradually but entire. Had the usual difficulty in persuading the women to let the patient lie down and sleep, and after washing out the vagina with corrosive solution left her resting quietly.

WRIGHT'S MODIFICATION OF LEISHMANN'S BLOOD STAIN.*

By HOWARD G. BARRIE, M.D., C.M., Chang-sha.

Mr. Chairman, Ladies and Gentlemen: There may be a number here who have not employed this stain, and it is a pleasure to direct your attention to one which fulfills the expectations required of a stain in a manner vastly superior to any previously in use. To those who have used it, it has already proved a great boon in microscopical blood work. Its appearance marks one step in advance of all previous modifications of the tedious and laborious method of Romanowsky. By its uniform regularity in securing good results, its wide application, the intensity with which it differentiates the several intimate structures of the organism, and simplicity of technique in using it, we possess a stain which excels any other one employed. In all cases of blood work, where a stain is required at all, it is equally valuable, as for example in examining leucocytes, erythrocytes, malarial organisms and basophilic granulations. As with Jenner's and Leishmann's stains no preliminary fixing process is necessary. In the use of Leishmann's stain the time element is not a troublesome factor, as the whole process may be completed in from seven to fifteen minutes. It is also true that when its coloring does "take," it does its work very well, but unfortunately we constantly meet with disappointing failures and often without apparent reasons; and the most painstaking accuracy in carrying out the technique fails to eliminate these disappointments.

Wright's modification permits the whole operation to be completed within five minutes and with much less care, or in the hands of an inexperienced operator the results will be almost uniformly satisfactory.

Moreover, mast cells, which elude discovery so frequently, are invariably differentiated from other forms of white corpuscles. In looking at red blood cells the blood plates are seen clearly, whereas they may remain undiscovered when using Ehrlich's stain. When examining malarial blood the difficulty so frequently encountered in deciding the exact nature of hyaline forms is quickly obviated. The uncertainties due to our inability at times to differentiate between the organism and its pigment, or the organism and its surrounding

* Synopsis of a paper given at the Kuling M. M. A.

capsule, are quickly solved by the employment of Wright's stain. In examining fresh blood specimens it may be difficult or quite impossible to detect the small or young unpigmented forms of malarial parasites, but with this stain we can run them down with satisfaction. In a word, it appears to combine in itself a number of the desirable points possessed by several of the older stains, and good results are secured by a simple and direct route rather than by a tedious and painstaking technique which in the end so frequently fails.

The technique in using it is so simple and results so uniform and constant that it may be employed as a routine diagnostic measure. Indeed Cabot, in his recent excellent work on blood, states that while fresh blood is valuable for study purposes it is much less accurate than the stained specimen for purposes of diagnosis. This is one of the chief values of Wright's stain, and after employing it the observer would hesitate to revert to the inaccurate method of examining simple, fresh blood films to establish or exclude a diagnosis.

The technique is as follows:—

1. Make a film of fresh blood on slide or coverglass by any good method, and at once add as much of the stain as the glass will hold. Leave one minute. This fixes and stains at the same time.
2. Add to the stain several drops of distilled water, or sufficient to form a greenish yellow metallic scum on the surface of the fluid; have this diluted stain on for two minutes.
3. Wash and let it stand in water for one or two minutes, or until the thin parts of the stained area appear a yellowish pink color.
4. Dry gently with blotting or filter paper.
5. Mount in balsam if a permanent slide is required, or examine immediately with oil of cedar applied directly to the stained film.

Results are as follow:—

The *hæmoglobin* of the red blood corpuscles stains pink or yellowish according to the degree of decolorization with water. *Polymorphonuclear Neutrophiles*. The nucleus take a deep navy blue color. The fine granules in the protoplasm surrounding the nucleus are tinted pink.

Lymphocytes. The nucleus stains a deep purplish blue and the rim of protoplasm around it takes a robin's egg-blue tint.

Eosinophiles. The nuclei stain light blue, while the granules appear stained a bright eosin color and the protoplasm a very pale blue.

Mast Cells. The vague outlines of the nucleus are seen dotted with a few or very numerous deep blue granules. These blue granules may be numerous enough at times to obscure the nucleus.

Malarial Parasites. The nucleus is achromatic to methylene blue, but shows an outer rim of basophilic protoplasm, which takes a fine light blue tint with minute granules of deeper blue, increasing to a blackish tint. The chromatin is clearly contrasted by an eosin tint.

Wright's stain is made by using polychrome methylene blue and Grübler's yellow eosin, and it may be purchased from the Harvard Coöperative Society Store, Boylston Street, Boston. If not subjected to too great variations in temperature, and if kept in an absolutely tight glass-stoppered bottle, it will keep at least six months, and probably much longer if fresh when purchased.

References: Cahot on the Blood.
Mauson's Tropical Diseases.

THE MUSEUM.

By JAMES L. MAXWELL M.D., Lond., Ta'nan, Formosa.

One of the very few disappointments of my visit to the Medical Missionary Conference at Shanghai in February was to see the miserable excuse for a museum that was designated by the proud name of "The Medical Missionary Association Museum."

To my mind it should be a *sine qua non* that every large mission hospital should have a museum of its own, both for the education of its students and for the preserving of the rare specimens which from time to time come into our hands in these surgically untrodden lands.

I write this article not because I have anything novel to bring forward, but because, from what I have heard missionaries say, I believe there is an impression abroad that to prepare museum specimens and put them up well is expensive, difficult and demanding a large expenditure of time; while on the other hand, my own experience proves it to be comparatively cheap, easy and a matter which can be dealt with at any time the surgeon has a few minutes to spare. I tried at first various methods with alcohol and with formalin, but these proved not very satisfactory in their results, and I finally abandoned them and most of the specimens I had previously prepared in favour of the method I shall presently describe, and with which I am now perfectly satisfied. I have, following this method, got together in the past few months quite a nice little nucleus for a museum, including tumours of upper and lower jaw, malignant tumours of neck, eye, breast, bones, etc., and am rapidly adding to those already on my shelves.

Three things only are needed by the surgeon who starts to form his museum:—

1. Jars and bottles for the finished specimens.
2. Large jars or carboys for the preparation of the unmounted specimens.
3. The proper preserving fluids.

1. For the sake of economy I use ordinary rounded glass jars and bottles with wide mouths. These have of course the disadvantage that they slightly distort the specimens, but this is principally in the line of slightly magnifying them, so that the objection is not as important as one might suppose. These jars I buy locally; they are of Japanese manufacture and are much used, both by Japanese and Chinese shopkeepers, for preserving perishable goods, such as biscuits, cigarettes, etc. The largest of them cost less than a dollar and are of sufficient size to contain a small ovarian cyst; the smaller ones vary from about ten to thirty cents each. I believe they could be obtained more cheaply still direct from Japan.

2. For preparing the specimens and preserving them in the gross I use one large earthenware carboy holding about a gallon and a half of fluid, value about one dollar; one glass carboy of about the same size, value about six dollars; and one glass basin, known I believe as a crystallizing basin. I brought this with me from England; it is about twelve inches in diameter and three and a half or four inches in depth—value about one dollar.

3. The preserving fluids that have proved both successful and easy of application are those known as Kaiserlings, No. 2 method. Essentially they consist of hardening in formalin, immersion in spirit till the colours are regained, and then preserving in a solution of *potassium acetate* and *glycerine*.

The fluids used are in detail as follow :—

1. Formalin	...	...	...	...	...	200 c. c.
Potassium nitrate	...	...	...	...	...	15 grams.
Potassium acetate	...	...	...	...	...	30 „
Water	...	...	...	...	...	1,000 c. c.

In this solution the specimen remains at least twenty-four hours, and longer if it be large, hard, and tough, but never more than five days.

2. Eighty per cent. alcohol.

The specimen is placed in the spirit solution until the colour returns, i.e., for two to sixteen hours.

3. Potassium acetate	...	...	...	...	...	200 grams.
Glycerine	...	...	...	...	...	400 „
Water	...	...	...	...	...	2,000 c. c.

The specimen is transferred to this from the spirit and finally mounted in the same.

No. 1. Solution may be used a number of times, but after using a few times about one-fifth of the chemical ingredients should be added again.

No. 2. Solution may be used a number of times, but as it gets weaker it will need, of course, to be used for a longer time.

For myself I keep No. 1 solution in the earthenware carboy, No. 2 in the crystallizing basin, where the specimen can easily be watched, and No. 3 in the glass carboy, where the specimens collect till I can spare the time to mount one or more.

In practice I find there are two objections to No. 3 solution.

First, that in these climates it has a considerable tendency to grow moulds; and second, that the amount of *glycerine* it contains makes the solution a little expensive when used for very large specimens. The first objection can be simply met by adding a large crystal of thymol to the fluid after the specimen is finally mounted. The second objection can be met by using a different mounting fluid; such a one is

Chloral hydrate	...	...	...	...	...	...	...	1 oz.
Potassium nitrate	...	...	...	...	...	...	...	1 "
Sodium chloride	...	...	...	...	...	...	...	5 "
Water	...	...	...	...	...	...	...	100 "

This is about a quarter of the price of the *glycerine* solution and pretty good, except to keep vivid colours.

I feel sure that any one who tries these simple methods will feel amply repaid by seeing excellent permanent specimens with natural colours well preserved.

Where the dollar is mentioned above the Mexican dollar is intended.

TWO INTERESTING ABDOMINAL CASES.

By J. PRESTON MAXWELL, M.B., F.R.C.S.

One of the features of the progress which is taking place in China is the increasing number of serious surgical cases which are coming to our hospitals for treatment. Many of these are such as one rarely meets with in home practice, while others are such as one may expect to meet in any surgical ward.

The first of these two cases belongs to the former category, while the second would fall within the latter.

Chhun, a man of 38, entered the Eng-chhun hospital in May of this year with the following history. About three and a half years before an inguinal hernia which he had had for some time, and which had become scrotal, became strangulated and he was very ill for some time. Eventually the whole mass sloughed and he was left with a faecal fistula in the right groin, from which a large mass of inverted bowel protruded. For the whole of the three and a half years he had been an invalid, and came to hospital to see if anything could be done for him. He lived full four days' journey away.

His condition on admission was as follows:—He was thin, but apparently sound, except for the lesion which brought him to hospital. In the right groin there was a protruding mass of inverted bowel, there being at least three knuckles outside. The skin all round was excoriated, and there were five openings into the lumen of the bowel. Two of these were at the level of the skin, and all of them led into the afferent portion of the small intestine. The opening into the descending portion of the intestine was not able to be found, and injection of coloured fluid per anum failed to make it manifest. The faecal material which came away was semi-solid, and apparently the opening was not far from the caecum. The right side of the scrotum was much deformed by scarring and the testicle involved in scar tissue. It was evident that nothing short of resection could help the patient, and accordingly he was carefully prepared. The skin was kept constantly washed and the afferent part of the bowel washed out with warm dilute *cresol*, both on the night preceding and on the morning of the operation. He was cleared out with *castor oil*, but no restriction was placed upon his diet, except that green vegetable was forbidden for a week before the operation.

On the 5th of June he was placed under *chloroform* and the skin surrounding the fistula cleaned as far as possible. An incision was made in the right linea semilunaris well above the fistula, the abdomen opened, and the wall divided downwards as far as the upper part of the prolapse. The incision was then carried round on both sides of the fistula in an elliptical manner, and this incision gradually deepened with one finger in the abdomen as a guide. The parts were very seriously matted and the omentum, bowel, bladder and tissues in the lower part of the iliac fossa were bound closely together. About half of Poupart's ligament had to be removed, and bleeding and oozing at this stage was very troublesome. At one point the wall of the bladder was wounded, but not perforated, and this part was reinforced by a stitch bringing the peritoneum over it. A large mass of omentum had to be divided. At the end of three hours it was possible to draw out the whole mass and determine its exact location. This was about eight inches above the ileo-caecal valve. The whole of the mass and a portion of the bowel above and below were rapidly removed, the mesentery being divided along the line of attachment to the bowel. The lower end of the bowel would only admit the little finger, but by using one finger after another, finally the thumb and then two fingers, it stretched sufficiently to allow the half of a small Murphy's button to be inserted. Suturing alone would have required an oblique incision of the bowel, and the condition of the patient required speed.

A few reinforcing Lembert sutures were placed over the button and one each side of the mesenteric attachment. A full foot of the bowel was excised.

The upper part of the wound was closed by sutures of silkworm gut, and the lower portion packed with *iodoform gauze*; no drainage tube being used, but the lower right quadrant of the abdomen being well flushed out with hot saline. The whole operation lasted three and a half hours, and the gap left in the parietes measured about three inches by two inches.

The patient remained on the operating table for some two hours, and was then removed to bed and hot bottles and *strychnine* administered. Shock was fairly severe, and one difficulty of the after-treatment was that he flatly refused to try and retain nutrient enemata. For one thing the anal sphincter had apparently lost its power and the bowel was much contracted.

So he was allowed to drink rice water, albumen water, and beef tea just as he liked. For three days there was no passage of flatus, and having vomited a dose of *magnesium sulphate*, five grains of *calomel* were administered. On the morning of the fourth day, there having been no result, five grains more were administered in one-grain one-hour doses. In the afternoon a soap and water enema was given, but returned unchanged. At six p.m. he passed flatus, and about midnight the bowels began to act, and he passed a quantity of very foul tarry looking material quite unlike fæces.

From this time he made steady progress, and on the evening of the twenty-second day passed the button. The abdominal wound was dressed and repacked daily, and there was no sign of any trouble in that region. The wound, at the base of which could be seen healthy bowel, contracted rapidly, and he left for home on the thirty-eighth day after operation with a small superficial wound on the abdominal wall, which was skinning over rapidly. His bowels were acting daily, the stool practically normal and the patient being on any diet he pleased, but being advised to avoid large masses of salt vegetable.

Three months later he was perfectly well and beginning to do some field work.

The second patient was a woman named In, who entered the hospital a few days after the first patient.

She had an abdominal swelling of three years' duration, and her age was twenty-five. It appeared to be an ordinary ovarian cyst, but was rather fixed, especially in the pelvis.

On May 27th the abdomen was opened by an incision in the middle line, and the tumour found to be a multilocular cyst attached in the right ovarian region. The omentum was adherent, but easily detached. But the great difficulty lay in its pelvic attachments. It was probably a cyst of the broad ligament, for the main mass of the ovary lay pushed over against the uterus. The main mass of the cyst having been removed, the remainder was carefully dissected out from the pelvis. Practically the whole of the right broad ligament was removed, the sutures being placed close against the uterus and close against the wall of the pelvis. The bladder, which was very adherent towards the base of the cyst, was wounded and repaired with three or four Lembert sutures. The ureter was not seen, though its position was determined by touch and great care taken of it. The operation lasted three hours, and at its close a pint of saline was left in the abdominal cavity, which was not drained.

With the exception of the upper part of the abdominal wound there was not anything to note about the after-history as far as the abdomen was concerned. In the upper part of the wound there was a small stitch abscess, which healed up at once. But the patient gave me a lot of anxiety. It seems that she had a rigor on the morning of the operation which the friends carefully concealed from me, fearing I should decline to operate, and after the operation she had a practically typical attack of "double continued fever" (Manson). I have seen this fever before, and as on previous occasions failed to find the cause or influence it much by treatment. There was no sign of typhoid; *quinine* had no effect, and a diaphoretic seemed to be of most use. The temperature came slowly down after the second rise, and at the end of six weeks she was discharged well but weak. Three months later she was fat and well. This latter case only exemplifies once again the difficulty of diagnosis as regards the attachments of abdominal tumours. I estimated before the operation that in spite of the apparent fixity it would take about an hour or so, and found myself confronted with a most difficult piece of dissection in the pelvis.

Needless to say both operations were carried out under the strictest antiseptic precautions.

One word with regard to after-treatment. I have ceased entirely to insist on any special position for my abdominal sections. They are allowed to lie as they like, but are forbidden to stand up or make any rapid movement. In the case of patients, where as in the first case there is a weak spot in the parietes, I order them not to lie on that side, but there is no need for them to lie on their back. As to feeding for the first twenty-four hours I insist on fluids, such as rice water and

beef tea, afterwards they are allowed to take what they like, and the ovarian cyst, whose case is given above, fed largely on raw cucumber during the week after the operation.

I believe in having the bowels opened early, and give my patients a purgative on the second day after operation in all cases where the bowels have not been injured. And even where an operation has been carried out on the bowels an early purgative prevents the occurrence of ileus and makes the patient much more comfortable. *Morphia* I seldom use. In abdominal operations, unless there is a serious degree of restlessness, I believe it does nothing but harm and greatly contributes to the occurrence of ileus. *Strychnine* on the other hand, administered by the skin, undoubtedly helps in toning up and stimulating the bowel.

LIGATURE OF THE COMMON FEMORAL.

By CECIL J. DAVENPORT, F.R.C.S.

Unfortunately the notes of this case were lost. The facts are as follow :—

Patient, aged about forty, a strong muscular man, received two stab wounds in the upper and outer part of the right thigh towards its posterior aspect. The skin wounds were from one-half to three-quarters of an inch long.

He was received, and treated by the house surgeon and retained in the hospital. When first seen there had been no excessive hæmorrhage and the patient was comfortable.

In the course of a day or two the whole thigh became considerably enlarged, hard and brawny, with superficial capillary engorgement and discolouration of the skin from above Poupart's ligament to the popliteal space. Over the adductor region the skin had the appearance of a severe bruise, and palpation elicited the feeling of deep fluctuation. There was no œdema, and the leg and foot were normal. The patient was restless, and in pain, and his temperature had risen to 102°-103°.

Inferring that either deep suppuration or internal hæmorrhage had taken place, the patient was put on the operating table and given *chloroform*.

On opening up the largest of the stab wounds it was found to run immediately behind the thigh bone into the muscles of the inner side. A finger passed into a large cavity filled with blood clot, from which, after the clot was turned out, a smart flow of arterial blood took place.

Two courses lay before me: (a) to considerably enlarge the three-inch opening which had been made, and strive amongst the deep muscles, already much engorged with extravasated blood, to find and tie the injured vessel; (b) to ligature the common femoral.

The latter course was decided upon. Packing the cavity with gauze a three-inch incision was made down on to the common vessel. The tissues cut through were deeply blood-stained. Two or three superficial vessels needed ligation. The sheath was easily found, opened, the vessel tied in continuity by a silk ligature, and the wound closed. The anterior incision healed by first intention. No further hæmorrhage took place from the original wound. With proper precautions the circulation of the leg kept good; only once, through getting uncovered, were the toes cold. The patient only complained of numbness and stiffness in his leg, and eventually left us with a very fairly strong limb, after about six weeks' treatment.

RESECTION OF OVER THREE FEET OF SMALL INTESTINE: RECOVERY.

By J. H. McCARTNEY, M.D., Chungking.

The patient, a country hoy, twenty-five years of age, single, farmer by occupation.

On examination we found him an ænemic with a very large congenital hernia. On the under surface of the scrotum was a large ulcerated surface. He gave the history of the hernia having been reducible up to two years ago, since which time it has always remained in the scrotum, and always very painful.

He was sent to me by an old student to see what could be done for his hernia. At first we thought the scrotum contained fluid, but examination revealed negative results. We then decided that the intestine was adhered to the sac and might present some difficulties in its reduction. After preparation for several days, with the assistance of Dr. Edmonds, the sac was opened and the condition as feared was found. The intestine was with difficulty dissected out, so great were the adhesions, which had become fibrous. The condition of the howel covered, as it were, the shreds and bleeding points caused by the breaking down of the adhesions, presented such a condition that I decided that a resection of the howel offered the patient a better chance for his life than returning the intestine into the abdomen. We accordingly

clamped the gut at its exit and return through the abdominal hernial ring, and removed the protruding portion by a "V"-shaped incision into the mesentery. The mucuous surfaces of the divided ends were first united with Lembert sutures, and a continuous catgut suture brought the serous surfaces together, which made a double intestinal suture. The clamps were removed and the gut returned to the abdomen. The extra scrotal tissue was removed and the hernial ring was closed with kangaroo tendon, the same as in a radical cure for hernia. No signs of testicle or cord were to be found during the operation, and we often wondered if it had become atrophied through the pressure of the hernia, or was in the abdomen. The patient showed no symptoms of shock and stood the operation well. He was fed on rice water for eight days, after which his bowels were moved by an enema and he was given she-fan to eat. His bowels soon took on normal action. At no time did he have a temperature up to one hundred. He was discharged cured in less than a month, very much relieved in mind and body.

Case II.—Strangulated hernia, becoming gangrenous sloughing off, and healing with foetal fistula.

The patient, single man, thirty-five years of age, from the province of U-nan, presented himself with the above diseases. He came not so much as his life was in danger as he wished to be relieved of the inconvenience caused by the foetal matter constantly seeping out of the fistula openings. He gave the following history:—

He had had a hernia from his early youth, and through some reason or other it had become strangulated some six or eight months previous to his presenting himself at our clinic. After fifty-six hours of strangulation he became unconscious, and remained in this condition for a long time. After he regained consciousness he found the condition above mentioned. Gangreneous scrotum and intestine gradually sloughed off, leaving him with five or six foetal fistulas all the way from the hernial ring to the bottom of the scrotum, which constantly excreted foetal matter. When he presented himself to me he had been eight months without a natural motion—the feces passing through these fistulas. As the man was in such a weak and emaciated condition we decided that a radical operation, such as opening the abdomen and attempting resection of the intestine was out of the question, and we decided to resect out the fistulas canal, suture the openings and await developments. We did this, and all but one opening over the hernial ring, which burst the sutures, still continued to excrete foetal matter. Up to this time we were unable to determine whether the lumen of the

gut had been entirely eliminated or not, and whether the lower portion of the bowel had any connection with the upper.

A second operation was done a week or two after, the sutures of which held much longer, and in the meantime he had the first natural movement for over eight months, which helped us to decide that the two portions of the gut were connected and that the patient stood a fair chance of recovery if we could succeed in healing this last remaining fistula. A few days after this natural movement of the bowels he suddenly developed symptoms of intestinal obstruction. We placed him on the operating table and reopened the old fistula which had become firmly healed, allowing the foetal matter to escape by the old channel. His condition gradually improved for a few days, and he remained this way for a week or ten days, after which he seemed to lose all vitality, from which he sank into a comatose condition, in which he died.

It seems to me that this case is interesting from more points than one. That it is possible for a patient to recover by the bowel rupturing in the above-mentioned way is not at all improbable; and second, the wonderful vitality of the man which would enable him to pull out of such a shock which this condition would naturally produce. I have been unable to find in the works on surgery and literature at my command the report of a single case in which strangulated hernia ever recovered in a similar manner.



DIVINE HEALING.

By JOHN A. ANDERSON, M.D., Taichow.

Man is a tripartite being, consisting of spirit, soul and body. The material part of his constitution is of sufficient importance to call for some attention. The body is intended for use not only in this world, but from it will be built up a glorious body capable of extraordinary powers in the ages to come. As part of the man it has been redeemed by the precious blood of Christ, and is intended even now on earth to be a dwelling place for the Spirit of God and a member of Christ, through which He can manifest Himself.

This wonderful body, with its marvellous bony framework, clothed with equally marvellous diversified fibres, its ligaments and muscles, its network of lymphatics and blood vessels, its telegraph system of nerves, its organs of speech and sight and hearing and smell, its complicated digestive system, its beautiful breathing machinery, and its

millions of living, active, individual cells—this, the crowning part of God's material creation, is truly a part of ourselves and we are responsible for its care. If the spiritual part of our being demands care, so also does the material, although in smaller degree.

In some cases the care of the body receives more attention than is necessary. Imaginary ailments absorb precious time in their imaginary prevention and treatment. An excessive amount of time is sometimes given to physical culture. On the other hand, many dear Christians are being distracted by conflicting opinions relating to questions about sickness and healing. Young believers in Christ, together with Christian workers of more mature experience, have drifted from their moorings, and are tossed on a sea of uncertainty by these conflicting opinions. Some devoted servants of God have come into bondage through a wrong conception of God in His relation to bodily health. By considering these opinions in the light of Holy Scripture we may discern what is true and what is false. The world is full of the glory of God, yet it is full of wrong ideas of God and His working. Hence it is of vital importance that our ideas and conceptions of God be derived from the Divine revelation.

A WRONG CONCEPTION OF GOD.

There is a prevailing opinion that God never sends sickness, but that all sickness comes from Satan. A teacher of this belief has said that a Holy God cannot communicate disease to His creatures, and that all pestilence and disease and sickness come from Satan. It is also taught that for a Christian to have any form of sickness is to fall under a temptation of Satan. This opinion has been illustrated by showing that Satan tempts an unconverted man to lie and steal, or to get drunk and beat his wife and children and indulge in bad language, but that a Christian is not assailed by these things because Satan knows that they do not constitute a temptation to him. The Christian, we are told, is tempted by sickness attacking him. Rheumatism or some other form of sickness comes to him, and as the unconverted man should resist the temptation to lie and steal or to get drunk, so the Christian should resist the temptation to become sick; both temptations are from Satan, and the Christian has no more right to be sick than the unconverted man has to lie or steal. The plain teaching of this is that it is sinful for a Christian to be sick, that all sickness and death come from Satan, and that God never sends sickness to men. When we enquire how far this is in harmony with Scripture teaching we find that Satan is sometimes allowed by God to bring both sickness and death upon

mankind. This is shown in the book of Job, where it is also proved that Satan cannot do these things without Divine permission, and that whatever sickness or suffering God permits to touch us will work for our good; but nowhere in the Bible are we told that all sickness comes from or through Satan. On the other hand, there is clear evidence that God Himself sends sickness and disease and death.

Taking two of the best known Divine judgments against sin we find that God, in the days of Noah, used water to drown men, and in the days of Lot, He rained fire from heaven to destroy men; in both cases He warned His servants of the calamities that He was to send, and there is no intimation of Satan having anything to do with the sending of these calamities upon the world. On the contrary, we know that it was in opposition to the work of Satan that God thus judged sinners and repressed evil. In the days of Moses, God sent plagues upon Egypt, slew the first-born in the household of the Egyptians, and finally drowned the host of Pharaoh in the Red Sea. We know that Satan, through Jannes and Jambres, counterfeited one or two of the plagues, but entirely failed in others, so that even the followers of Satan had to admit, "This is the finger of God."

An Israelite is struck dead by God. 2 Samuel vi. 7:

"And the anger of the Lord was kindled against Uzzah, and God smote him there for his error; and there he died by the ark of God."

Ananias and Sapphira are struck dead. Acts v. 1-11.

Seventy thousand Israelites are slain by pestilence in three days. 1 Chronicles, xxi. 9-17:

"And the Lord spake unto Gad, David's seer, saying: Go and tell David, saying, Thus saith the Lord, I offer thee three things: choose thee one of them, that I may do it unto thee. So Gad came to David, and said unto him, Thus saith the Lord, Choose thee. Either three years' famine; or three months to be destroyed before thy foes, while that the sword of thine enemies overtaketh thee; or else three days the sword of the Lord, even the pestilence, in the land, and the angel of the Lord destroying throughout all the coasts of Israel. Now, therefore, advise thyself what word I shall bring unto him that sent me. And David said unto Gad, I am in a great strait: let me fall now into the hand of the Lord; for very great are his mercies: but let me not fall into the hand of man. So the Lord sent pestilence upon Israel: and there fell of Israel seventy thousand men. And God sent an angel unto Jerusalem to destroy it: and as he was destroying, the Lord beheld, and he repented him of the evil, and said to the angel that destroyed, It is enough, stay now thine hand. And the angel of the Lord stood by the threshing-floor of Ornan the Jebusite. And David lifted up his eyes, and saw the angel of the Lord stand between the earth and the heaven, having a drawn sword in his hand stretched out over Jerusalem. Then David and the elders of Israel, who were clothed in sackcloth, fell upon their faces. And David said unto God, Is it not I that commanded the people to be numbered? even I it is that have sinned and done evil indeed; but as for these sheep, what have they done? let thine hand, I pray

thee, O Lord my God, be on me, and on my father's house; but not on thy people, that they should be plagued."

An innocent child is struck by God; remains sick for seven days and dies. 2 Samuel xii. 13-18:

"And David said unto Nathan, I have sinned against the Lord. And Nathan said unto David, The Lord also hath put away thy sin; thou shalt not die. Howbeit, because by this deed thou hast given great occasion to the enemies of the Lord to blaspheme, the child also that is born unto thee shall surely die. And Nathan departed unto his house. And the Lord struck the child that Uriah's wife bare unto David, and it was very sick . . . on the seventh day the child died."

Miriam was smitten with leprosy when she spoke against Moses. Numbers xii. 9-10.

Gehazi, at the word of the prophet Elisha, became a leper. 2 Kings v. 27.

God smote King Uzziah with leprosy. 2 Chronicles xxvi. 19, 20:

"Then Uzziah was wroth, and had a censer in his hand to burn incense: and while he was wroth with the priests, the leprosy even rose up in his forehead before the priests in the house of the Lord, from beside the incense altar. And Azariah the chief priest, and all the priests, looked upon him, and, behold, he was leprous in his forehead, and they thrust him out from thence; yea, himself hasted also to go out, because the Lord had smitten him."

Paul declares that God will make Elymas blind for a season. Acts xiii. 11:

"And now, behold, the hand of the Lord is upon thee, and thou shalt be blind not seeing the sun for a season. And immediately there fell on him a mist and a darkness; and he went about seeking some to lead him by the hand."

Herod, smitten by the angel of the Lord and eaten of worms. Acts xii. 23:

"And immediately the angel of the Lord smote him, because he gave not God the glory: and he was eaten of worms, and gave up the ghost."

Other proofs might be given that sickness, disease and death come from the hand of God, but the above are sufficient. They show that He used them in judgment upon His enemies and in the correction and chastisement of His people. It is not necessary here to consider how God *can*, in absolute holiness and love, communicate disease to His creatures. We have seen that He did it, and with a lowly and obedient mind we may understand why He does it still.

IS IT SINFUL IN A CHRISTIAN TO BE SICK?

In the whole Bible there is no such statement as that it is a sin to be sick. The New Testament records three representative cases of sickness in Christian workers. These cases differ from those already given. There is no thought of their sickness being a judgment on

account of sin. Nor is there a suggestion that any of the three workers was grieving the Spirit by being sick.

Epaphras, the saintly slave, was "sick nigh unto death." Instead of blaming him for a lack of faith, or suggesting that repentance is needed, it is rather with a note of commendation that the apostle indicates overwork as the cause of the sickness . . . "Hazarding his life" to supply a church's lack of service to Paul. Phil. ii. 27-30.

Timothy, the man of God with an ideally strong spiritual life, had a weak and infirm body. 1 Tim. v. 23.

The Apostle Paul himself had, during his Christian life, an infirmity of the flesh. In his early struggles he besought the Lord for healing, but healing was not given. After passing into a deeper experience he said, "I glory in my weaknesses." 2 Cor. xii. 9, 10.

MORTAL BODIES QUICKENED BY THE SPIRIT.

It is claimed by some that the Holy Spirit is here promised for the present quickening of our bodies. "But if the Spirit of Him that raised Jesus from the dead dwell in you, He that raised up Christ from the dead, shall quicken also your mortal bodies by His Spirit that dwelleth in you." Romans viii. 11. Various degrees of quickening are claimed by the different teachers as being indicated in this precious promise; some think it means an acceleration and a reinforcement of natural vigour, so that the Christian worker receiving a more abundant life into the physical system, is able to do and endure more than could be done without this added vigour.

Others believe that in addition to this added physical power for service there is a resisting power bestowed whereby the possessor is kept from all attacks of sickness, and the body is thus preserved in perennial health.

Others hold that not only does this verse offer an added physical power and freedom from sickness and disease, but that it also promises freedom from death.

The Bible contains many exceeding great and precious promises, and we need to encourage ourselves in them and by faith to make them our own; but the above opinions as to what this verse promises are based upon a misunderstanding of the words of the verse and a failure to appreciate the context. First, looking at the context we find that verse 10 says: "If Christ be in you the body is dead because of sin, but the spirit is alive because of righteousness." It will be observed that it is not said: "If Christ be in you the body is being quickened," but "if Christ be in you the body is dead." The Christian has life,

but it affects the spirit, not the body ; so we read, "The spirit is alive." The fact being that the spirit which was dead in trespasses and sins has been quickened and is alive to serve God, whereas the body is still under sentence of death, and is waiting for the time to come when it will be quickened, i.e., partake in its share of the redemption. So also verse 23, "Ourselves also, which have the first-fruits of the Spirit, even we ourselves groan within ourselves, waiting for the adoption, to wit, the redemption of our body."

The context thus plainly indicates that the Holy Spirit has quickened the spirit of the regenerate man, but that the body is not quickened in this life.

We now consider the words of verse 11. They plainly teach that all who have the Holy Spirit dwelling in them will have their bodies quickened by the Holy Spirit. The same word "quickened" is used in Ephesians ii. 5. "When we were dead through trespasses . . . God quickened." In Ephesians the quickening of the spirit is an accomplished act. In Romans viii. 11 it is a future quickening of the body that is predicted. Our spirits having been quickened, our bodies shall be quickened and made partakers of the very life of the risen and glorified Lord Jesus.

Turning now to the exact wording of the text, we find that the Spirit of God uses two words that help to bring further light upon the subject. The first word is "also." It links our bodies with the body of the Lord Jesus. "He that raised up Christ from the dead shall quicken 'also' your mortal bodies," etc. A work of the same character as was accomplished in the body of Christ, as it lay in the tomb, is to be performed in the bodies of His people ; that work made His body alive for evermore ; the same work in our bodies will quicken them into immortal life.

The other word to which I refer is "mortal." It means that which may die, and it is spoken of in the New Testament as the normal condition of the believer's body while still living on earth. The apostles did not long for death ; they longed for the coming of Christ ; their hope was not the grave but the sky ; they waited not for their bodies to crumble and decay into dust, but for their bodies to be made immortal and rise into the presence of Christ and dwell in eternal glory and blessedness. Yet these holy apostles and prophets and martyrs died, and their bodies have crumbled to dust, because their bodies were not only mortal but also became corruptible. The bodies of the living Christians are called mortal ; the bodies of the dead Christians are called corruptible. Upon this subject see 1 Cor. xv. 50-53 :

"Now this I say, brethren, that flesh and blood cannot inherit the kingdom of God; neither doth corruption inherit incorruption. Behold, I tell you a mystery: We shall not all sleep, but we shall all be changed, in a moment, in the twinkling of an eye, at the last trumpet: for the trumpet shall sound and the dead shall be raised incorruptible and we shall be changed. For this corruptible must put on incorruption, and this mortal must put on immortality.

In Romans viii. 11 the Apostle instructs us that the bodies of the living Christians are to be changed. In 1 Cor. xv. he explains that the dead bodies of deceased saints will also be changed, and the relation is explained between the resurrection of the dead Christians and the changing and taking up of the living ones.

The coming of Christ to the air, and calling His people up to meet Him there, was the hope of the living Christians. The corresponding promise was, that even their mortal bodies would be quickened by the Holy Spirit and made like to Christ's glorious body and caught up to be for ever with the Lord; and it is to this he refers when he says: "He who raised up Christ from the dead shall quicken also your mortal bodies by His Spirit which dwelleth in you."

HEALING BECAUSE OF THE ATONEMENT.

Under this head we have a doctrine which has proved very insidious and very destructive. It has led many of its followers into grave error. They teach that Christ having died to redeem us from sin and from the curse, we can in this life be set free from sin and all its consequences, including disease, suffering and death.

They frequently quote Matt. viii. 16, 17:

"When the even was come, they brought unto Him many possessed with devils: and He cast out the spirits with a word and healed all that were sick: that it might be fulfilled which was spoken by Isaiah the prophet, saying, Himself took our infirmities and bear our diseases."

From this it is claimed by them that Christ on the Cross, having put away sin and disease, the Christian has therefore the privilege of living on earth free both from the power of sin and the power of disease. Some claim total eradication of all evil and complete immunity from disease, and to have attained sinless perfection and the redemption of the body.

The verses quoted from Matthew show that while our Lord was on earth He gave all the proof that was needed to vindicate His claims as Saviour and Messiah. He did this at His Father's command, and in His own inherent right as the true Messiah and the appointed sin-bearer, wielding power both over matter and over spirit. He had the right to heal diseases, for He came to bear them. He

still holds this right, but He exercises it, as He always did, in accordance with His Father's will. But it is not God's will that His people should in this life be made free from the suffering and sickness that have come as a result of the curse. This is shown in Romans viii. 20-25 :

"For the creation was subjected to vanity, not of its own will, but by reason of him who subjected it in hope. Because the creation itself also shall be delivered from the bondage of corruption into the liberty of the glory of the children of God. For we know that the whole creation groaneth and travaileth in pain together until now. And not only so, but ourselves also, which have the first-fruits of the Spirit even we ourselves groan within ourselves, waiting for our adoption, to wit, the redemption of our body. For by hope were we saved; but hope that is seen is not hope; for who hopeth for that which he seeth? But if we hope for that which we see not, then do we with patience wait for it."

The teaching here is most emphatic. It contains five statements bearing on what we are now considering :—

1st. The Apostle and all who have the first-fruits of the Spirit have a hope—something not yet seen, but which is being waited for.

2nd. This hope includes the redemption of the body.

3rd. The creation itself will partake in this happy consummation.

4th. The creation and the Christian are both groaning in pain, waiting for the deliverance that it will bring.

5th. Our present condition, although causing groaning, is chosen for us and for creation by our wise and loving Father, who knows what is right and best.

The very day that Adam sinned his spiritual life ceased. Communion with God, the life of his immortal spirit, was broken, and he became spiritually dead. The spirit was not extinct, but it was separated from the Author of its life. The material part of Adam—his body—was at the same time placed under sentence of death, but it did not really die till many years afterwards. Then the spirit which is the life of the body was called back to God who gave it, and the body was dead—not extinct, but separated from the spirit. We have thus two deaths in one person, or rather one death in two parts—a spiritual part and a physical part. The second part is usually termed temporal death in contradistinction to eternal death, which Scripture also calls the second death, when spirit, soul and body are separated from God and cast into the lake of fire. (Soul often comprises both soul and spirit, it being the union between spirit and body. Thus when God breathed into Adam's nostrils the breath of life, he became a living soul. The word "soul" in the Bible can be shown usually but not always to mean both soul and spirit.)

The curse affects not only man's body, but the whole animal creation and the soil, and they have to wait for their share in the

glorious redemption work of the Lord Jesus. The very ground will yet yield its increase. "Instead of the thorn shall come up the fir tree; and instead of the brier shall come up the myrtle tree." Isaiah lv. 13. The beasts of the field will rejoice and the wild beasts will cease to hurt and destroy. Isaiah xi. 9. "We wait for a Saviour, the Lord Jesus Christ, who shall fashion anew the body of our humiliation, that it may be conformed to the body of His glory." Phil. iii. 20, 21. Our glorious Saviour has accomplished complete emancipation for us, from sin and all its consequences; but it is His will that we wait patiently for the redemption of the body. He has quickened these spirits once dead through trespasses. He will also quicken these death-doomed and dying bodies. "Though our outward man is decaying, yet the inward man is renewed day by day." 2 Cor. iv. 16. "Indeed we who are in this bodily frame do groan, being burdened: not for that we would be unclothed, but clothed upon, that what is mortal may be swallowed up of life." 2 Cor. v. 4. Apostles and martyrs have not yet entered into their complete redemption. Their bodies are under the power of death, and must also wait until Christ comes. This is the hope of the church. We wait for Him. At the call of Christ, at the voice of the archangel, and the trump of God we shall obtain the redemption of the body. We shall be "like Him." 1 Thes. iv. 13-17. Then, and not till then, will come to pass the saying, "Death is swallowed up in victory."

(To be concluded.)



Medical and Surgical Progress.

Pathology and Bacteriology.

Under the charge of JAMES L. MAXWELL, M.D.

In a former number of the JOURNAL I described Captain Rost's methods of preparing and using leproliu in the cure of leprosy. Now it is one's unhappy duty to point out that this must be added to the long list of temporarily vaunted, but finally abandoned, remedies for this terrible disease. The reason for the failure is simple, viz., that leprolin never contained, in any of its stages of preparation, the bacillus lepra. The following extract is taken from the *British Medical Journal*, September 9th, 1905:—

It may be remembered that last year Captain Rost, I. M. S., reported that he had succeeded in cultivating the bacillus of leprosy, and with a substance made from it on the lines of tuberculin, which he called "leprolin," he had obtained encouraging results in the treatment of leprosy. Since that time marked improvement in the symptoms, although not actual cures, have been obtained in various parts of India.

Recently Captain Rost was put on special duty at the Pasteur Institute, Kasauli, in order that his results might be verified, and a report by Lieut.-Colonel Semple, director of the Institute, has just been issued in Simla. Experiments were carried out by Colonel Semple, with the co-operation of Captain Rost, from January to April of the present year. The experiments were carried out with the media prepared by Captain Rost from leprosy cases he selected, and the report states that Captain Rost agreed that the methods adopted were what he himself wished done

to demonstrate his method of culture of the leprosy bacillus, and every possible condition that Captain Rost could suggest for their success was tried. The result, however, was a total failure, it being found that when the precautions possible in a well-equipped laboratory were taken to exclude errors from contamination, no growth whatever took place in the media inoculated with leprosy bacilli, and Colonel Semple states that if these precautions had been adopted by Captain Rost when experimenting in Rangoon, "the chances are that the literature from his pen on the subjects of the cultivation of leprosy and the preparation of leprolin would never have been published." The cultivation of the bacillus having failed, there could be no preparation of leprolin from such cultivation.

The temporary benefits said to have been obtained by the use of the so-called leprolin may have been due to the filtered toxins from the contaminated median used in its preparation—one of the many so-called cures for leprosy which have from time to time during the past century gained a short-lived reputation. Much sympathy will be felt for Captain Rost, as he has for years worked diligently in his leisure hours at his various researches with improved apparatus, owing to there having been no government laboratory in the province of Burma, and in a hot, damp climate, in which the difficulties of avoiding contaminations of cultures are infinitely greater than in temperate countries.

NEW WORK ON SPIROCHÆTES.

From the *British Medical Journal*,
September 16th, 1905.

The *Berliner Klinische Wochenschrift* for September 4th, 1905, contains two additions to the rapidly increasing literature of pathogenic or quasi-pathogenic spirochætes. The more important is a report of work done by Paul Mulzer. Mulzer's researches fall under three heads. In the first place he sought the spirochæte *pallida* in twenty-two cases of undoubted syphilis, primary and early secondary, either by squeezing out the secretion of the sore, by taking a serum produced by rubbing with a stout platinum wire, or preferably by actual scraping the lesion with a sharp spoon. In twenty cases appropriate staining methods revealed its presence: the two failures he accounts for, one as due to lack of experience on his own part, the other to the rubbing, causing an effusion of blood instead of lymph. The organisms were usually solitary; now and then a couple were interwoven, and in one case a retiform conglomerate of twenty to forty were seen, such as has been described in the pemphigus serum of congenitally syphilitic children.

The second series of experiments was in the nature of a control; the smegma of fifteen healthy people

and the secretion from forty-one cases of skin disease, including several of tertiary syphilis, was examined. In healthy smegma no spirochætes were found. Of twenty-nine cases of disease of the genitals, spirochætes could only be demonstrated in eight, comprising balanitis, papilloma and carcinoma. In the glands, which were swollen as a result of balanitis, puncture revealed no spirochætes.

Thirdly, Mulzer seeks to differentiate the spirochæte found in non-syphilitic cases from the spirochæte *pallida*. He says that with practice this is quite easy to do; the latter is smaller, slighter and paler, and its curves are sharper and more corkscrew-like than in the former, in which they are longer and smoother. Mulzer believes that the spirochæte *pallida* is found constantly in the products of syphilis while in the infective stage, and that it does not occur in other diseases or in health.

The other contribution is by Professor Bonhoff, of Marburg, in which he claims to have isolated a small spirochæte from pustules of calf vaccinia. Photo-micrographs are given, in some of which a spirochæte or two may be seen, but it is evident that further research is necessary before this organism can be considered to have earned the name which Professor Bonhoff has given it, viz., spirochæte *vaccinæ*.

Hygiene, Hydrotherapy and Physiologic Medication.

Under the charge of KATE C. WOODHULL, M.D.

PHOTOTHERAPY IN CHRONIC DISEASES.

I shall not in this paper undertake to present a *résumé* of what is known respecting the influence of light upon the bodily functions, or even summarize our present knowl-

edge of the therapeutics of light. My purpose is only to present a brief note to record some of my own observations.

Nearly thirty years ago I began the use of the sun bath as a general vital stimulant in the treatment of chronic maladies. I confess that

my first efforts were quite empirical. I was led to employ light baths through the fact that they were so highly prized by the ancients, recommended by Hippocrates and by various other Greek and Roman medical writers. When traveling in Italy and Old Mexico I observed that the poorly fed peasantry showed great fondness for exposing themselves to the direct rays of the sun. I also observed that dogs, cats, and other animals did the same. Sunlight appeared to me to be a natural agent which might be utilized, and, as I had chosen physiologic medicine for my specialty I laid hold of this one of a group of natural curative agencies which might be employed in combating disease.

The discoveries of Helmholtz and other physicists respecting the nature of light, and especially the more recent researches of Finzen, Siemens, Herve, Mangon, Bailey, Deherain, and other investigators respecting the physiological effects of light, have provided for phototherapy a thoroughly rational physiologic basis. I shall not tax your patience with a recapitulation of the important facts which have been developed by these researches and observations. I desire especially to call attention to a therapeutic principle, which, so far as I know, has not been recognized in phototherapy, namely, the therapeutic value of the effect produced upon the skin by the actinic rays of the sun, of the electric arc, the incandescent filament, and other incandescent bodies.

One of the effects of heat on the skin is to dilate the peripheral vessels. Just how this is accomplished it may not be possible to explain with certainty. The most recent and plausible theory is that there are in the small vessels longitudinal as well as circular fibres, which, by contracting, serve to increase the lumen of the vessels.

This effect is produced by heat applied to the skin in any manner or from any source, as by means of a hot bath, a heated object brought in contact with the skin, hot air, and heated vapor, as well as by heat in the form of radiant energy; but radiant heat is unquestionably more effective than any other in producing this dilation of the vessels through its greater penetrating power. The rays of energy pass through the skin and penetrate to a considerable depth, being converted into heat as they meet with resistance. A more rapid and profound effect is thus produced by the heat of the sun, and from an arc light, or incandescent filament, than by thermic applications of other sorts.

Another important effect produced by heat is nervous inhibition. Acting through the temperature nerves, heat lessens nervous irritability, and thus becomes one of our most precious means of combatting pain. The same inhibitory influence may be employed as a means of lessening functional activity in an over-acting organ. It is for this reason that we apply heat for the relief of spasm, as in colic and muscular cramp, and to produce muscular relaxation by lessening the excitability of the muscular tissue, so lowering its tone. The general depressing effects of heat, which are easily made manifest by a hot bath, are well known. The fomentation owes its value as a means of relieving pain in many cases to this inhibitory effect, as in neuralgias and especially in visceral neuralgias.

The effects of heat as above mentioned are of course temporary. The vascular dilatation rarely persists longer than an hour or two after an application of heat, no matter how prolonged, and not infrequently is followed by a contraction of the vessels and very pronounced anemia. This may be due to the chilling of the surface

either from evaporation of the moisture which is always present in increased amount in consequence of the stimulation of the sweat glands, or to the reaction which follows over-stimulation of any sort, or both influences combined. The inhibitory effect produced by heat is also more or less transitory transient. Nevertheless both these effects are exceedingly valuable, and, as I shall show further presently, the effect of solar heat from other luminous sources in dilating the vessels of the skin is of immense therapeutic importance in dealing with chronic maladies.

A more intense and permanent effect upon the cutaneous vessels is produced by the actinic ray of sunlight and the arc light, when applied with sufficient intensity to produce so-called sunburn, or solar erythema. The intense redness of the skin which appears usually within ten or twelve hours after a sufficiently prolonged exposure to intense actinic rays, is evidence of complete relaxation of the vessels of the skin and filling of those vessels with blood to an extraordinary degree. The skin is capable of holding, when these vessels are distended, one-half or two-thirds of the blood in the body. This fact sufficiently emphasizes the difference in the volume of blood contained in an enemic skin and one in which the vessels are fully distended. The therapeutic significance of this fact lies in the influence which congestion of the skin exercises upon the blood volume of internal parts. If the blood volume supply of the skin is within a short time increased from a small fraction of the total blood volume to one-third or one-half of the whole amount of blood contained in the body, it is evident that we possess in arterial congestion of the skin a method whereby we can quickly withdraw from the great vascular

organs of the trunk from one-fourth to one-half of their total contents, thus affording almost instant relief to a congested liver, engorged spleen, hyperemic lungs, inflamed stomach or intestines, or congested spinal cord.

Careful study of the blood supply of internal organs in relation to the skin shows that the blood vessels of every important organ are very differently connected with the vessels of the skin, either arteries or veins or both, so that it is possible to produce effects by means of local as well as general hyperemias of the skin, thus inducing collateral anemia of vascularly related parts. In my work on hydrotherapy and in my chapter on thermotherapy in "Cohen's System of Physiologic Therapeutics," Vol. IX, I have summarized the facts which I have been able to collect respecting the vascular relations of the skin with internal parts, and I take the liberty to quote from the last named work the following paragraphs:—

"The vessels of the brain are freely connected with those of the scalp and the nose through the parietal foramen, the foramen cœcum, the mastoid foramen, the posterior condyloid foramen, the foramen of vesalius, the foramen ovale, the foramen lacerum medium, the carotid canal, the anterior condyloid foramen, as well as the diploë of the cranial bones.

"The meningeo-rachidian veins, which form dense plexuses in the spinal canal, are freely associated with the cutaneous veins of the back and with the dorso-spinal through the anastomosing veins which issue from the canal through the intervertebral foramina and unite with the intercostal, vertebral, lumbar and sacral veins.

"The blood supply of the eyelids and of the skin covering the eyebrows and adjacent portion of the forehead is collaterally related with

the branches of the internal carotid that supply the eyeball.

"The circulation of the middle ear is collaterally related with the circulation of the skin of the face and the head of the same side through the common carotid. The circulation of the internal ear, on the other hand, is associated with the skin of the back of the neck, being derived from the vertebral arterier.

"The vessels of the mucus membrane of the nose and pharynx are associated with those of face and the sides of the head through the common carotid.

"The circulation of the lungs is collaterally related with that of the skin covering the arms, the chest and the upper part of the back. The pericardium and the parietal pleura of the anterior part of the chest are collaterally related with the skin covering the anterior portion of the chest wall through the internal mammary artery.

"The parietal pleura of the posterior portion of the chest and the visceral pleura are collaterally related with the intercostal vessels. A collateral relation also exists between the bronchial arteries, the nutrient arteries of the lungs and the intercostals, especially those of the right side. The skin covering the arms is collaterally related with the pleura of the upper and anterior portion of the chest through the subclavian artery. There also exists a collateral relation between the nutrient vessels of the lungs and the vessels covering the anterior portion of the neck through the inferior thyroid arterier. The collateral relationship existing between the vessels of the skin and of the lungs is still further extended by the connection of the bronchial veins with the azygos veins of the right side and with the superior intercostal or the azygos veins of the left side. It is in the highest

degree interesting to note these extensive connections between the pulmonary circulation and the cutaneous surface.

"The kidneys are associated with the skin covering the loins through the renal branches of the lumbar arteries.

"The vessels of the prostate in man, the uterines and ovaries in women and the bladder in both sexes are associated with the cutaneous vessels overlying the sacrum, the buttocks, the perineum, the external genitals, the groins, the inner surface of the thighs and the suprapubic region; these parts being chiefly supplied by branches of the internal iliac artery.

"The rectum is similarly associated with the skin covering the anal region and the perineum and that of the lower extremities.

"There is a collateral relationship, both venous and arterial, between the stomach, liver, spleen, intestines and pancreas and the skin of the trunk which overlies these deeply seated organs.

"The portal circulation communicates with the systemic circulation, thus establishing a collateral relationship with the cutaneous vessels at half a dozen or more points, especially the following: the hemorrhoidal plexus, the esophageal veins, the left renal vein, the phrenic vein at the surface of the liver, the epigastric veins at the umbilicus and the circumflex iliac vein.

"In a similar way it may be stated that the upper half of the body is collaterally related with the lower half, a fact of which constant use is made when the lower extremities are warmed to divert blood from the head.

"It should be remembered, however, that every portion of the cutaneous surface is vascularly related, at least remotely, to every internal part. It is also interesting

to note that the vascular areas connected with the several internal viscera do not altogether correspond to the reflex cutaneous areas connected with the same parts, although in the main the reflex areas and the vascular areas are practically identical. For example, the skin covering the front of the chest is of greatest importance as a means of reflexly influencing the pulmonary circulation, whereas the cutaneous vessels of the skin covering the back of the chest are more intimately related with the vessels of the lungs than are those of the anterior surface. A most important reflex relation exists between the skin covering the lower portion of the sternum and the kidneys, whereas the principal vascular relation exists between the kidneys and the skin covering the loins.

"The portion of the body below the umbilicus is collaterally related with the head, the arms and the upper half of the trunk; and the legs are likewise in collateral relation with all parts of the body above them, especially those which occupy the pelvic cavity."

I am obliged to confess that it is only within the past few years that I have appreciated the importance of utilizing phototherapy as a means of producing local and general hyperemia of the skin for the relief of the visceral congestion which is rarely absent in chronic disease. The pallor of the skin which is nearly always present in chronic invalids signifies not only anemia of the skin, but necessarily also congestion of the viscera. When the vessels of the skin are in a state of chronic spasm, especially when the skin is in that "hide bound" condition which indicates deficient development of the subcutaneous tissue, there is necessarily a surplus of blood in the internal parts. The general muscular weakness which accom-

panies chronic disease prevents exercise, so that the muscles, as well as the skin, are anemic. The importance of this fact will be apparent when it is considered that the muscles when active are capable of holding one-half of all the blood in the body. The idle muscles contain not more than one-fourth or one-sixth as much blood as the active muscle. A pale skin and inactive muscles necessarily imply congested viscera.

This chronic congestion of vital organs necessarily results in derangement of functions and often in change of structure. Passive congestion or stagnation of the blood in parts necessarily involves diminished oxygenation and accumulation of CO_2 and other toxic substances in the tissues. The result is partial asphyxiation and autointoxication of the congested parts through the accumulation of tissue poisons. A congested liver cannot do its duty as a bile-maker and toxin-destroying organ. The congested stomach first manufactures an excessive quantity of highly acid gastric juice, but with a deficiency of pepsin. Sooner or later even the gastric glands are worn out and hypopepsia and apepsia result. The stomach then becomes a culture for microbes of various sorts. Under the influence of the toxin produced, glands degenerate, resistance is lowered; general autointoxication occurs and general various cachexias develop, skin diseases of various sorts and general and local nervous disorders appear, especially the various forms of neurasthenia. Even melancholia and paresis may be traced to the influence of toxins generated in the alimentary canal.

Similar results may follow congestion of the intestines. The resulting catarrh of the duodenum may extend into the liver and gall bladder, hepatic abscess, pancreatic

disease, appendicitis, hemorrhoids, the various forms of colitis, mesenteric tuberculosis, tubercular peritonitis, cancer of the intestines and peritoneum and other maladies which are the outgrowth of lowered general and local vital resistance which may be properly traced to a blood supply which has deteriorated by long retention in over-dilated vessels. Abdominal dropsy and hepatic cirrhosis may be traced to the same cause. Pernicious anemia and possibly other forms of anemia are also due to this condition. Congestion of the sympathetic ganglia gives rise to abdominal pains of various sorts and a great variety of reflex pains and other symptoms, pain in the head, back and limbs, paresthesias, neuralgias and an almost infinite variety of mental and general nervous symptoms, vertigo, mental confusion, depression, pseudoapoplexy, nervous irritability, nervous exhaustion, morbid fears and the *tout ensemble* of morbid phenomena presented by the vast majority of proportion of neurasthenics and neurotics, both men and women.

The incandescent electric light bath which I introduced into therapeutics some fourteen years ago I have found of inestimable value in dealing with all classes of chronic invalids. During the time which has elapsed since I first employed it this bath has been used under my immediate supervision in more than forty thousand cases, aggregating several hundred thousand applications. At first I was inclined to attribute its chief value to its eliminative effects, but deeper study of the subject has convinced me that its chief value rests in its influence upon the circulation. Under the influence of the general light bath the skin is filled with blood. The stimulation of the sweat glands is incidental. The perspiration has some value through

its influence on general metabolism, but the amount of toxic matters carried out through the skin is exceedingly small. The complete filling of the skin with blood removes the disabling congestion of the liver, stomach, spleen and other internal parts. This relief is rendered more or less permanent by the fixation of the blood in the skin, effected by the cool application which always follows the electric light bath as well as other heating measures. The vascular dilatation following this cold application is of much longer duration than that resulting from the application of heat alone; thus a more or less durable effect is produced. By a daily repetition of this procedure normal conditions are gradually restored, the circulation of the skin becomes more and more active, the amount of blood in the internal organs is diminished, the enlarged liver and spleen contract, the congested sympathetic nerve centres return to the normal state, the vital resistance of the tissues is increased, catarrhs of the stomach and intestines and biliary passages disappear, the digestive secretions acquire their normal characteristics, the liver, adrenals and lymphatic glands and other poison-destroying organs resume their functions, the various symptoms of autointoxication disappear, the skin reacquires its natural elasticity and color, and the patient gradually returns to a normal state.

These statements are not made on hypothetical grounds, but can be backed up by many thousands of clinical experiences, not only by myself, but by several scores of colleagues who have made use of this powerful therapeutic means at the Battle Creek Sanitarium and in more than sixty allied institutions in different parts of the world. For producing the effects above referred to, long applications

are not necessary. Three to six minutes are ordinarily sufficient. The duration of the bath need be only sufficient to produce moistening of the skin from perspiration. In certain classes of cases longer baths are needed. This is especially true of obesity, rheumatism, gout and diabetics who are strong and not emaciated. In those cases it is necessary to continue the bath sufficiently long to produce elevation of temperature so as to stimulate oxidation of the proteid wastes. For this purpose the duration of the bath should be fifteen to twenty minutes, or until the temperature taken in the mouth reaches 100.5 to 101 F. It is better, when possible, to take the temperature in the rectum.

Next to the incandescent electric light bath the sun bath is most effective as a means of producing general hyperemia of the skin with collateral anemia of the internal viscera and restoration of the normal balance of the circulation. I make use of the sun bath for this purpose at all seasons of the year, but find it especially valuable in the summer time, when I employ it by means of the outdoor gymnasium. The arc-light bath may be used at all seasons of the year. A cabinet may be employed for this purpose with an arc-light at each of the four corners, or the effects desired may be produced by excessive applications to different parts of the body surface until the whole body has been gone over. When it is desired to produce the more permanent effects which follow sunburn I find it better to expose circumscribed areas of the skin on successive days rather than the whole surface at once, as the patient is thus saved considerable discomfort. A sunburn involving the whole surface may produce profound disturbance in an over-nervous patient. By repeated ap-

plications the skin becomes very vascular, and intense pigmentation is produced. I have seen the skin so darkened that the individual might be mistaken for a mulatto or an Indian if only the color of the skin were regarded. The improved circulation of the skin which accompanies the pigmentation of the skin is always attended by relief from a multitude of disagreeable symptoms, and when these general light applications are supplemented by other indicated physiologic measures, proper regulation of diet and general habits of life, multitudes of cases incurable by other means are, in the course of a few months, restored to excellent health.

Local applications of light produce equally pronounced beneficial effects. Applications of the incandescent light may be made by means of the photophore, which consists of a metal cover enclosing one or more electric lamps. Lamps of any power desired may be used. I ordinarily employ sixteen candle-power lamps. Care must be taken to protect the edge of the photophore if it is made of metal, so that the skin will not be burned. I have constructed photophores of various forms for application to different parts of the body.

I find these local applications of special value as a means of applying radiant heat to the spine, the abdomen, the joints. This is a much more effective means than any of the various forms of hot air apparatus which have recently been so extensively sold. A higher temperature can be borne because of the absence of moisture, and more exact results can be obtained, as it is not necessary to cover the skin, and there is no possibility of setting the patient's clothing on fire; and, if reasonable care is exercised, there is no danger of burning the patient. It is not necessary to confine the air in the

apparatus, as the heat is not in the air, but is produced in the tissues; radiant energy being gradually converted into heat, as it meets resistance in the opacity of the tissues of the skin and underlying parts. The part to which the application is made, may be made to tolerate an intense application for a long time by occasionally passing the hand over the heated surface. The pressure of the hand facilitates the change of blood in the parts, thus cooling the overheated nerves while the penetrating rays of energy still continue their work. I make great use of both the ordinary arc-light and the arc-light with iron, water-cooled electrodes for producing local hyperemia. By making the applications long enough to sunburn the parts the effect of a very hot fomentation may be produced, with the advantage that the beneficial effects lasts for days and weeks instead of a few hours. The duration of these local applications is from four to ten minutes, according to the patient's susceptibility and the effect desired. If the patient is blond and has a thin white skin the minimum time is indicated.

Rikli believed that light is a food, supplying to the nervous

system some subtle element which it requires. Neuens asserted that "light is the only source of life." Attention has been called to the fact that the inhabitants of hot climates required less nourishment, because "they are nourished by light."

It has been the purpose of this paper to show that some at least of the most remarkable of the therapeutic effects of light may be readily accounted for by principles which are well known to therapeutics, and without appealing to any theory of subtle, indefinable or hypothetical influence. I do not by any means consider light a panacea, but when employed in the manner indicated in this paper I am sure the result will not be found disappointing. In fact, next to hydrotherapy, I know of no therapeutic means which may be effectively employed in so large a variety of chronic maladies as may be those which utilize the miracle-working energy of light.

Read at the fourteenth annual meeting of the American Electro-Therapeutic Association at St. Louis, Mo., September 14th, 1904.—*Journal of Advanced Therapeutics*, February, 1905. By J. H. Kellogg, M.D.

Surgical.

Under the charge of J. PRESTON MAXWELL, M.B., F.R.C.S.

ON X RAY BURNS.

On X ray burns not a little has been written, and the subject is touched upon in a paper in the St. Bartholomew's Hospital (London, England) magazine for July, 1905.

There it advises that they be covered up and left alone. Far better is it not to get them at all, for of all forms of dermatitis they are about the most intractable. And not only are they hard to heal but they are frequently followed by a necroid scar. Also, Jones says:

"Those who are much engaged in X ray work are extremely liable to a form of chronic dermatitis of the hands. The nails become brittle, lined and hard, and the skin of the knuckles and backs of the hands becomes thickened, sore and cracked. It has been reported that the testicular secretion is also injuriously affected in persons regularly exposed to the action of X rays, and there is disappearance of active spermatozoa from the seminal fluid. Lead aprons have been recom-

mended to be worn as a prophylactic, and this is done in some of the larger X ray clinics on the Continent."

Whether this latter statement is true or not, it is increasingly clear that the X ray is a powerful agent which needs to be carefully handled, and the writer of this paragraph warns his readers from personal experience to keep clear of X ray burus if they do not covet a very unpleasant illness.

ON THE CLOSURE OF CLEFT PALATE IN INFANTS.

Sir Thornley Stoker, in the *British Medical Journal* for June 24th, 1905, has a very valuable article on this subject, and to any one living in China one worth careful reading.

It consists of an appreciation and description of Brophy's operation for the closure of cleft palate.

Speaking generally the operation consists in drawing together the superior maxillæ by sutures passed above the palatal process of the maxilla. In the first three months of life the bones are not too far ossified to prevent their being drawn together.

The soft palate may be operated upon at the same time, though Stoker advises that it be left till later.

The hare-lip is repaired at a later date.

For the sutures silver wire is used and removed at about the end of a month. With this early closure of the cleft the question of the difficulty of learning to speak becomes much less, and the feeding of these cases also becomes a more simple matter.

It is impossible with the space at one's disposal to do more than thus indicate the tenor of the paper, but all our members may be safely advised to get and read the paper for themselves.

ON TUBERCULOSIS OF THE KIDNEY.

In the *British Medical Journal* for June 17th, 1905, Kelly, of Baltimore, has an instructive article on this subject. He there deals with the way in which the kidney becomes infected. He states his belief that the infection of the kidney is also always hæmatogenous, and the focus is almost always to be found in the thorax.

The disease is almost always progressive, and spontaneous cure is almost unknown.

The diagnostician has to consider:—

- (1). Has the patient a tuberculosis of the urinary tract?
- (2). Is the disease still localized?
- (3). If the diseased kidney is removed, is the remaining kidney able to do the work?

Tubercle bacilli should be found in the mixed urine, and then in that from one kidney only when the separator has been used.

Inoculation in a guinea pig may also be tried and the injection of tuberculin, which may produce besides the constitutional symptoms severe pain in the affected kidney.

A persistent acid pyuria should always make one suspicious of tubercle.

Kelly prefers direct æroscopic examination of the bladder.

The ideal treatment for the condition is undoubtedly nephrectomy, but a preliminary nephrotomy may be of great use as a preparatory measure. Kelly makes his incision as a rule in the superior lumbar triangle, and in advanced disease it is often worth while not to try to remove the kidney intact. Intracapsular enucleation may be by far the best procedure.

Some brilliant results have been obtained by removing both kidney and ureter in cases in which these parts have alone been affected.

TUMOUR OF THE NOSE.

ENGLISH PRESBYTERIAN MISSION HOSPITAL, }
TAINAN, FORMOSA, *September, 1905.* }

The accompanying photograph is of, what must be, a very rare tumour of the nose. The details of the case are as follows:—

Tan Chhai, a Chinese woman, aged 31, came to the hospital on 13th March, 1905. On the bridge of the nose, rather nearer the point than the root of the nose, is a hard tumour not fixed to the skin and freely moveable on the bridge of the nose on which it is accurately balanced. It is about the size of a walnut. The patient states that it has been steadily growing larger for the last eight years. It is neither tender nor painful.



Operation.—The tumour was excised under *chloroform* with some of the redundant skin over it. It was not attached to either nasal bones or cartilages.

On section, which was made with some difficulty, the tumour proved to be an ivory osteoma surrounded by a very thin layer of cartilage.

The wound healed by first intention and the woman was discharged a few days later, greatly delighted with her improved appearance.

JAMES L. MAXWELL, M.D., Lond.

The China Medical Missionary Journal.

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No. 1.

Editorial.

"DIVINE HEALING."

The paper, "Divine Healing," by John A. Anderson, M.D., which we publish in this issue, is one which, one would naturally say, belongs rather to a religious journal than a medical, and, indeed, our first decision was to tell the Doctor that we could not use it. After more careful reading and a talk with Dr. Anderson, we decided to accept the paper, because it is distinctly of interest to the Association, and because it bears directly on matters which have been much talked of in recent times in our midst.

Dr. Anderson's paper is evidently the result of some years of close study and careful thought. He has been much thrown with various descriptions of faith-healers, and although a tolerant, broad-minded man, clearly sees the lack of consistency in their theories and the hopeless diversity of their methods, while he is able, through the maize, to find the element of truth that is the life of this unpractical practice. The fact that the author treats the matter from the basis of a close and almost literal interpretation of the words of the Bible, although it does not appeal to us as strongly as a less textual and more circumstantial study, is particularly applicable, as it meets the faith-healers on exactly the ground on which nine-tenths of them base their evidence.

We all believe in Divine healing and we all pray for it, and we all see it if we keep our eyes open. So do we all pray for daily bread, yet we grow wheat and reap it and grind it and bake it and eat it. And we do so with the distinct conviction that we are wiser and better than the type of man whom Bishop Pattison described as being too lazy to pick bananas off the trees, but who lay under them and waited for the fruit to drop down. Those men

had faith in powers above, yet we know that our method of growing wheat makes the better men. The world is a great and supremely practical training school: effort is the price of success. The man who will not grow wheat, must wait for the bananas to fall, but he is the weaker and less to be envied man; the man who knows how to heal and will not, must wait for the bananas to fall also, and he too is an unenviable weakling. God works through men most of His great works for men. Through men He is planting His Kingdom in the world, otherwise what business of ours is it to meddle with His work. Through men He is growing the world's harvest of wheat, otherwise why should we meddle with the food supply. Are not the bananas good enough? Through men He is teaching the world to cure its own sick, to work its own works of mercy, to relieve its fellows in pain. The other day a man presented himself with a sixty-pound fibroid-tumor which had been growing for sixteen years; and we prayed, but not that God would cure the man while we sat at home and had faith about it. We knew how to cure that tumor ourselves, and what we prayed for was skill to do it and strength for the man to bear it; and then we went across the street and removed the tumor, and the man bore it and got well. We believe that God cured that man, but we do not believe that God would have cured that man if all the medical missionaries in China had prayed for it for fifty years, unless one of them had been energetic enough to go across the street and get to work.

Pray for skill! pray for wisdom! and then study and then work! When wisdom fails, pray again and study again! When skill fails, pray again and work a whole lot harder! So shall we be faith-healers indeed, with faith in God and faith in ourselves too as working with Him in His great field of labor in which we do not lie upon the ground with our mouths wide open, but in the full realization of our Christian manhood, "Go labour on! Spend and be spent!" So shall men learn wisdom from Him Who gives to those that seek, and so shall the field bring forth its hundred fold of wheat, of healing and of strong and love-won souls.

It is all very easy to sit at home in a pink boudoir and dream dreams of a world without sickness, in which a great era of eye-

shutting has made a paradise of earth, or to hold forth in eloquent periods to an admiring audience on the "notness of the is," but it is a whole lot better faith to open one's eyes wide and still believe and work where the sores stink and the brother men grow pale with agony, and with a scarcely uttered prayer in one's heart, to wash the putrid feet into health and to cut the very agony back again into peace.

Before Dr. Stanley went home for a visit, the Editors had painlessly extracted from him a promise that he would give us a practical paper on the application of scientific hygiene to Chinese communities, and now that he has returned we are hoping to perform the more painful operation of extracting the paper itself. Meanwhile we, who live in Shanghai, are able to note some of his methods, and one of these seems so very easy of application and so befitting the attention of mission hospitals that we are minded to speak of it from our objective standpoint. This autumn the following bulletin was issued by the Shanghai Health Officer and some hundreds of copies were put in the hands of at least one of our local hospitals for the Chinese with the intention of having a copy put in the hands of every tuberculous patient. Not long before this issue was made, we remember, a little patient was brought into our dispensary. She was in the last stages of phthisis and was expectorating large tuberculous masses. Her companion, who was not her mother but the mother of eight other well children, invariably received these expectorated masses in her finger and flipped them on to the floor, and did not so much as wipe her fingers off.

Why, would it not be worth our while to get up a series of these and other bulletins on such questions and keep them constantly on tap for distribution in our wards and especially in our out-patient departments? Such subjects as drinking water, typhoid fever, leprosy, tuberculosis and its care, syphilis, trachoma, certain diets, scabies, pediculosis and others could all be touched on in such a manner to the considerable edification of our patients and to the greater ease of our consciences. Most of us use some form or other of religious tracts; why not medical and hygienic tracts as well and charge a cash or two to enhance their value in the eyes of the recipient?

上海工部衛生局預防癆症傳染之法

一住居上海之華人，有四分之一，患癆症身故。

一癆症最易傳染，然除滅淨盡，亦自有法。

一癆症初起，係人感受病者毒苗，吸入腹內，以致染成是病，然實驗其害之由來，緣微生物根於病人痰內，且及於病者與人言笑噴嚏咳嗽之時，隨口四射之涎末。

一微生物由何而起，係從癆症人發生，其蕃衍不可計數者，尤在痰爲叢聚之處。

一癆症之人，吐出濕痰，其毒尙難播散，迨日久曝乾，氣挾塵埃，隨風颺散，其害遂不可思議，能使傳染無盡，由此人而禍及他人。

一沿路吐痰，大爲穢德，况吐出之痰，爲患癆之人，則遺害更覺無限，故吐痰必盛以磁盂，且盂內須貯除穢藥水，或置清水，更或向陰溝火爐之內吐痰，如此，方可無患。

一既患癆症，應隨時防閑，勿對人咳嗽。

THE MEDICAL CONFERENCE OF 1907.

In another recent letter the President of our Association, Dr. Christie, of Moukden, referred to our next conference with much interest, approved of the time selected and suggested that we people who live in and near Shanghai should begin to agitate things, in other words to stir up the dry bones, we mean the "saw-bones."

Now if there is one sphere of usefulness to which the Editor feels that he has had a special call (at least since he took up the JOURNAL) it is that of an agitator.

We all know that in China it takes time to get up anything properly, except riots, and so to give a little impetus to the cause we have at heart we ask the members of the Association scattered far and wide over this country to note the following facts, to store them up in their memories for ready reference and to act upon them, singly or in their various district meetings, that they may be of future use :—

I. We are to have a conference in about fifteen months, that is only a little over a year, and a year is a very short time.

II. Try and make your plans, so that as many of you as possible may be here and help that conference on.

III. Jot down any subject or subjects that you want discussed, do not leave it until the last minute, and send them in to the Editor, who will hand them on to the committee. By so doing we can get some ideas about the program.

Take that big subject which we failed to touch upon in our last meeting—hospital construction—with its discussion of plans, materials, ways and means. Of what vital interest it is to many who are looking forward to future usefulness.

The adaptation of native materials and products for reasons of economy is a problem that many a good man and true has had to face alone and work out his own salvation on.

Here is another subject that we have never seen written up or discussed. Are there any native remedies or methods which we could use to advantage? Then there is always the fascinating field of cases, old troubles and new, and old enemies with new faces. Confucius said the superior man never hurries, but he always has a "move on." Or perhaps that is one of the things attributed to him which he should have said.

With this issue the JOURNAL meets its readers with the old but ever new greeting—Happy New Year. May it be so indeed, not as some men would count happiness, but in the sense of that true happiness which comes from the consciousness of work undertaken and accomplished for our fellow-men for His sake and in His service.

At this time we may well pause and ask, What will the new year bring forth? The old year's close was saddened by the tragedy at Lienchou, in which one noble woman physician laid down her life and a senseless mob destroyed the hospitals that existed only for its own good.

These are indeed critical times in which we live. Even as in 1900 China is "in convulsion" and under the guise of reform and new patriotism lurk many of the same old devils of envy, hatred and malice. "By their fruits ye shall know them." Will they be more kind to us now than they were then? The outcome of all this strife and confusion is impossible of prediction. Some of us may live to see our most cherished plans for the help of this people go up in smoke or may even be called upon to give up the lives we hold in trust.

While it is very true that the blood of the martyrs is the seed of the church, let us physicians not take unnecessary risks with these lives of ours or those of our colleagues or families.

Let us remember that it takes less time to raise buildings than men and women, and that in God's sight human life is of more value than property. We believe that most rational missionaries will agree that we can do much more for this people by living for them than by dying for them.

Let us watch then, and if the political situation becomes too strained and the dictates of prudence or our consular representatives demand that we retire from our sphere for a time, we should not regard it as an act of cowardice but look upon it as a duty.

STATISTICS.

Again we wish to call the attention of the members of the Association to the statistics for 1905. We are sending out blanks this year with the JOURNAL as usual, and we ask the hearty interest and co-operation of every man who is engaged in active medical

work, whether hospital or dispensary. The statistics for 1904 were an improvement over those of 1903. We certainly hope that some of the big centres like Peking, Hangchow and Canton will come to life and send in their reports. We know they are doing good work and are not ashamed of it, and we should like to hear more about it at first hand.

PUBLICATION FUND.

Contributed for the purpose of publishing medical text-books and works in the Chinese language useful to the advancement of medical education ; to be used under the control of the Publication Committee of the Medical Missionary Association of China :—

Previously reported	...	...	...	...	...	\$1,715.98
Dr. J. R. Coxe	...	...	...	...	...	5.00
„ David Landsborough, Shoka, Formosa	...	...	...	...	...	20.00
„ O. S. Behrents, Cho-shan, Honan	...	...	...	...	...	10.00
„ H. B. Taylor, Ngankin	...	...	...	...	...	10.00
						\$1,760.98



Hospital Reports.

The year 1904 has been an interesting and varied one in many ways, but a year of great irregularity in hospital routine. I myself have only had seven and a half months of hospital work proper, and statistics have suffered in consequence, but statistics are not everything, and a medical missionary has much to do in addition to caring for his patients.

Gradually the conviction comes home to one that "medical missionary" and "medical man" are far from synonymous terms. In some real sense every man one meets is a "patient." Each one of the uncounted thousands with whom one is brought into some sort of contact during the year is better, or worse, for the glimpse so gained of a professed representative of the Master. And to each of those burdened, sin-stricken hearts there ought to have come some haunting, sweet suggestion of the presence of that Master Himself to set him athirst for more. That word "missionary" implies all this, and our "patients," reckoned thus, are beyond the utmost reach of mere statistics.

And yet statistics have their place and use all the same, and last year's have been more encouraging than I expected in spite of the numerous interruptions. We have had 330 in-patients, and the operation list totals 477 as against 455 the year before, neither total including the minor surgery of ordinary out-patient work.

Beggars have been fewer and suffering from poverty less evident, one reason for this being found in the plentiful harvests that have glad-

dened all our hearts, and another in the shipment, under comparatively luxurious conditions, to South Africa of so many who would otherwise have had to beg or steal. Their absence removed perhaps the most harrowing and difficult part of our work and enabled us to do considerably more than we otherwise could have done for the few bits of human flotsam and jetsam that the "yellow sea" of China's millions threw up at our hospital doors.

At times the wards were very full, far more so than we had contemplated when the buildings were erected. One day I had the occupants of the wards all counted and found that there were 103 in quarters provided for 50! Of these seventy-five were actual in-patients, almost all operation cases, and the rest were their so-called "nurses."

In the autumn the heavy field-work, consequent upon the abundant harvest, kept folk too busy to attend to either their own or other's complaints till the threshing floors were bare, and then the rush that followed was absorbing all our time and strength when an urgent call from a sister mission left no option but to go to their aid. This was the English Methodist New Connexion Mission in Lao-ling, sixty miles to the south of us and across the Shantung border. My wife went with me, and for some days her hands especially were full of work for the sick ones, but health soon returned to the stricken household, and in ten days we were back again in T'sang-chow. It was a great pleasure to have it in our power to bring such timely help and to enjoy, in pleasant surroundings, the luxury of being so really useful.

Our colleagues we have come to count upon for help of many kinds, but special mention should perhaps be made of Mrs. Murray's faithful and valued help in evangelistic work amongst the women.

There is still another lady of whom we think with gratitude, Dr. Mary Horner, of Moukden, whom the storm in the north drove away from her own sphere of work in that city, and whom her own kind heart brought here, by God's direction.

A new departure this year has been the preparation and distribution among Chinese officials and gentry in the district round about us of a report in Chinese of our work during 1903 with information as to our aim and methods. This has resulted in considerable enlightenment and in an increasing number of donations for our work.

THE TRAINING OF MEDICAL STUDENTS.

A more serious attempt has been made this year than formerly to give regular instruction to the six student-assistants, upon whom devolves so much of the regular work of the hospital. They have been through the elementary anatomy and physiology required for a standard ambulance course in England, with various additions to meet the special requirements of our work. They have also studied carefully the muscles of the upper extremity, have learnt some rudiments of dispensary, materia medica and pharmacy, as well as a smattering of elementary medicine and surgery.

Their resulting growth in efficiency has been distinctly gratifying, and many cases that I should last year have had to treat myself are now satisfactorily left to them. Whilst I was away in Lao-ling a man was brought to the hospital

with a severe fracture of both bones of the leg. I came back to find it properly set and put in splints, nor did I need to alter anything. In due course they put up the leg in a plaster case and the man did very well. They all take turns at *chloroform* administration, and in the above case, and some few others, have done so in my absence. Opium "suicides" I rarely see, simply hearing that such cases have come, been saved and gone again. They also do numerous small operations and are gradually gaining confidence in such work. All surgical dressings are left to them, with very few exceptions. My motto throughout the year has been, "If you would have men trustworthy, trust them."

They get training of other kinds also. Mrs. Peill has been teaching them English, and one man, Hsieh En-tsêng, who learnt English for a year in Tientsin, can now speak intelligibly and indeed almost fluently, and is beginning to study English text-books on his own account.

He is considered by the Chinese to be the best English scholar in the city, better far than the teacher of English in the local government school, and has been asked to take private pupils in this subject.

This man, Hsieh, I purpose to send to the Union Medical College in Peking as soon as it is open, in the hope that he will some day prove himself well worthy of the best training the Mission can bestow.

The above attempts at training have made one thing abundantly clear. The students must be released from a great part of the routine work of the hospital if they are to have time for serious study. For months on end the wards have been so full, operations so many and "dressings" so numerous that the men have been too tired by evening to read, and even the

daily "lecture" has had to be abandoned.

Two remedies are therefore to be tried in the year that lies ahead:—

1. The restriction of the numbers of in-patients to the actual number of beds in the wards, instead of allowing them to pack in like sardines as heretofore.

2. The appointment of regular "nurses," men chosen for Christian character and reliability, who shall also act as ward evangelists and be trained to change all surgical dressings, be responsible for the cleanliness and order of the wards and generally carry on the routine work of the hospital. Each such "nurse," as regards the treatment of the patients under his care, to be responsible to a specially appointed student.

The first rule will necessitate much hardening of one's heart and can only be carried out in the firm conviction that the present hardship to the few will result in future blessing to the many in the time ahead when branch dispensaries and hospitals can be established under the care of the students now being trained.

RELATION OF LOCAL TRAINING TO THE UNION MEDICAL COLLEGE IN PEKING.

In view of all that has been written above it is perhaps advisable to state in what relation this training work stands, so soon to be carried on in the college in Peking.

First, then, let me say that I am fully in sympathy with the work to be done in Peking, and hope to send at least one (and as many more as the Society's grants will allow) of my present students thither. But I confess I am not at all sanguine as to the Society's grants being sufficient to cover the expenses in Peking of all the men we need.

The fee for the five years' course there, exclusive of food and travelling expenses, is at the rate of fifty taels per student per annum, or two hundred and fifty taels for the full course of five years.

If I send up four men from here it will mean that the L. M. S. has to pay Tls. 200 per annum, or Tls. 1,000 in the five years for fees alone, besides as much again, at least, for board, i.e., Tls. 2,000 for the full course for four men, with no really certain guarantee that any one of them will continue faithful to the Mission thereafter, and in spite of the fact that after their training their services will have to be paid for at a much higher rate of salary than the Mission has paid out here yet.

They cannot pay their own fees, or their own food expenses in Peking for the simple reason that they are all from poor homes, mostly married and the fathers of little children. Nor is there as yet much hope that the native church will contribute to their support. There are too many calls elsewhere and so much other important work just waiting to be done.

The Government Medical College in Tientsin pays men well to come as students, nor are these men tied down rigidly to government service; the majority, when trained, do what they please. We shall have to compete against this college in Peking.

Here in Tsang-chow I must have assistants in any case, and meanwhile must train such men myself, there being no supply of ready-trained men available. Not only so, but we badly need men for a series of out-station branch hospitals and for medico-evangelistic tours in our vast district, which is as large as the whole of Wales.

In view of the above considerations I must still prepare to do what I can for our own local needs

whilst ready to send to Peking all the men the L. M. S. will support there and hoping for the time when one of the new Peking doctors, perhaps young Hsieh En-tseng himself, will come back hither to help me in giving our students here a more satisfactory and thorough training than any I alone can bestow. Or perhaps God has some other plan still which as yet we cannot see.

ADDITIONS TO THE HOSPITAL BUILDINGS.

During the year two convenient isolation wards have been erected, each enclosed in its own little yard with small kitchen, etc., adjoining. Their cost was almost entirely met from funds collected in Edinburgh by Miss F. G. McFarlane with generous help from the Morning-side Congregational Church Christian Endeavour Society.

We have also added four convenient living rooms, each to accommodate two or three students, with one large general study and class-room, the whole enclosed, with kitchen, fuel house, etc., in a nice roomy compound containing already a tennis court and possibly hereafter with gymnastic apparatus also. The cost of these rooms has been met partly by a generous donation of £40 from Mr. and Mrs. Theodore Walker, of Glenn Hall, near Leicester, partly by another generous gift of £36 from the above mentioned friends in Edinburgh and partly from the general funds of the hospital. Their total cost has been about £120, and that of the isolation wards another £40.

In addition, we have built three commodious women's wards, with matron's rooms and the necessary outhouses, at a cost of about £225, affording accommodation for some thirty patients. Of these the cost has been met from funds collected by my wife, with the addition of a

legacy of £100 from her father, the late John McFarlaue, Esq., J.P., of Edinburgh.

ARTHUR D. PEILL, M.B., F.R.C.S., Ed.

[We only regret that lack of space prevents the publication of more of Dr. Peill's report, as it is thoroughly interesting throughout, but as we are essentially a medical publication it is necessary to skip about more or less. We trust that he meets with as much interest in the home lands as his own interest in the work deserves.—EDITORS.]

As the medical work in our Southern Baptist Mission is new, there are many problems which we will have to solve in determining what plans to adopt to make our medical work the greatest power possible in bringing people to Christ. Among the problems may be mentioned the following:—

1. *Where and when to treat the Sick.*—Shall we open dispensaries and hospitals and invite them to come to us, or shall we go from village to village to see them? The latter plan seems to have been the one adopted by the Master and by the early disciples, and there is no question but to-day there is a great field for the medical missionary in itinerating. It is equally clear that he can do a good work in opening hospitals and dispensaries. To my mind to adopt both is the ideal plan of work. Through the hospital he is enabled to treat patients that he could not treat without a hospital, and then he has an opportunity of teaching the doctrine of Christ as he could not if he did not have them with him for a period time. Then in the dispensary he is prepared to receive patients who require treatment every day, and can also draw to him a class of patients that he could not otherwise reach. In going

from village to village he has an opportunity of reaching many who need to be treated and also of preaching Christ, in person and by native evangelist, to many who have never before heard. He also has an opportunity of following up impressions made upon hospital and dispensary patients by going to see them in their villages. To work these plans together, so as to get the best results from them, there must be at least two physicians located at the same station. Two working together can easily do the work of three. To my mind the ideal plan is, two medical missionaries at the same station working in the hospital, dispensary and itinerating. I am aware that there is an impression quite prevalent that one physician at a station is enough. This would probably be true if the medical missionary came to China only to treat the bodies of men; but as he doubtless feels as much called to lead people to Christ as do other missionaries there is no reason why two or even more should not be located at the same station. I hope to see the day when we shall have two or more physicians at every station where we do medical work.

When treat patients? This I shall discuss only in reference to dispensary work. To my mind it is better to hold a clinic every day. If for no other reason, many of the patients who come to us need to be treated every day.

It is better to keep dispensary open all day, or have specified hours for clinic? I think it decidedly better to give only two or three hours during the day to dispensary patients. In this way the physician can see all patients treated, and yet have time for study, for teaching medical students and inquirers.

2. *Should the Medical Work be made Self-supporting?*—This is a problem upon which there seems to

be quite a difference of opinion. This difference ranges from self-support to the treatment of patients without any charge whatever. Some missionaries of many years' experience take the position that where charges are made, you commercialize the work of the medical missionary in the minds of the Chinese, and thus injure his work as an evangelizing agency. Others insist that where no charge is made you pauperize those who come and keep away the wealthy class of people, who would come if they were expected to pay for their treatment.

It seems that the very large majority of persons engaged in medical work in China think there is a middle ground which is preferable to either of the plans mentioned, and we find a majority of dispensaries now charging a nominal price for the admission of patients. The prevailing price seems to be twenty to thirty cash, and this by many is charged only on the first visit. This plan of course does not aim at self-support from the fees of patients.

In the settlement of this problem the medical missionary of course must consider the views of his brother missionaries and of the Board under which he works, and will often see the necessity of adopting their views instead of his own.

In the Warren Memorial Hospital we charge from fifty to one hundred large cash for every visit. That is, if a patient comes every day for a month he must pay these charges for each visit.

In observing as closely as I have had opportunity to do, the difference which the working of the two plans makes in the attendance, is this: where a nominal admission price is charged the attendance of patients is larger than where a higher price is charged, but the number of

patients from the wealthy and literary classes is much smaller.

I find in the clinics of the Warren Memorial Hospital, where our charges look to self-support, yet where we attempt to have it understood that the very poor are treated without charge, that a very small per cent. of our attendance is from that class, and that our attendance is made up largely from the middle and higher classes. While our attendance is growing, it having been thirty per cent. more for 1904 than for 1903, yet we constantly feel that we are keeping from us many of the very poor whom we would be glad to treat.

It seems to be an established fact that where a very large number of the very poor come for treatment the wealthy and literary class will not come, and the plan of having separate hours for the treatment of those who are able to pay and those who are not, has suggested itself to me as one which could probably be worked advantageously. So far as I know this plan has not been tried in China. The trouble which I see in it is the temptation to some who are able to pay to put themselves on the pauper list.

3. *Dispensary Preaching.*—Those who come for treatment never fail to hear the Gospel of Christ. During the clinic there is constant preaching in the waiting room. But how best follow up impressions made on patients in hospital and dispensary is one of the hard problems. Those who have shown an interest should not be dismissed from our minds and hearts when they return to their homes. We should not only follow them with our prayers, but with our efforts to lead them to Christ. The medical missionary, with only one at a station, cannot find the time to go often to the country. To send a native helper to see them is good, but will not always accomplish so

much as if the man who has treated them could see them in person. As he cannot go, then probably one of the best plans is to hold an occasional class for inquirers and invite all those who have become interested, either directly or indirectly through the medical work, to come and study for a week or more.

4. *Practical Suggestions.*—In the solution of these problems even our friends in the home lands can be of great service. How? (1) By praying the Lord to give us wisdom in solving all these problems. (2) Praying the Lord to send medical missionaries to China until we have at least two at each station where we do medical work.

T. W. AYERS, M.D.

Monday, the 27th of November, will be remembered as a red letter day in the history of medical mission work in the Fu city of Tai-chow. For some years medical work has been successfully carried on in two small dispensaries in the city by the C. I. M. and C. M. S. respectively, but real progress has been much hindered in both cases by want of room, fresh air and the conditions generally necessary to modern medicine and surgery. Monday, however, witnessed the completion of two years' work and many years' expectations in the dedication of the C. M. S. hospital. The building is situated on a hill to the north of the city in a fine airy situation and completely separated from Chinese houses. The hospital is one long block running from east to west and measuring 127 feet. On the west are the women's wards, consisting of two large and one small ward, and the men's on the east, comprising two large and two small wards. They are separated

by the middle block, consisting of preaching room, bath rooms, operating theatre and consulting room. Everything is arranged on the latest principles, and the wards are light, spacious and airy, and the whole building will accommodate fifty patients. The work has been planned and carried out by Dr. S. N. Babington, who is in charge of the C. M. S. medical work in Tai-chow, and readers of this paper, who know him personally, will congratulate him on the successful issue of the two years' work and worry necessary to the erection of such a building in an inland city.

The work, as far as one can judge, has met with the sympathy and interest of the local officials, all of whom were invited to the opening ceremony, and who in the morning showed their appreciation by sending presents and in the afternoon by appearing in state, thus lending the necessary artistic colour to the scene. The ceremony took place in the afternoon and was conducted by Bishop Moule; on the arrival of the prefect, the officials were conducted to the hospital chapel and the Bishop explained the origin and purpose of medical missionary work. Then followed prayer and a hymn, which closed this part of the proceedings. The officials were shown round the wards, and great interest was evinced in the surgical instruments displayed in the operating theatre, the use and purpose of several being explained to the admiring crowd. An adjournment was made to tea, which was provided in Western fashion and apparently evoked much appreciation; in fact several of the officials wished to investigate Western food still further and handed portions to their secretaries to be discussed at leisure. After tea a photographic group of officials and foreigners was taken in front of the hospital.

There had been some doubt as to the best means of effecting a clearance of the compound at the close of the proceedings, but this was settled in most unexpected fashion, for a large fire broke out in the city and was just seen as the guests were proceeding to take a leisurely and dignified departure. The exodus thereupon degenerated into an undignified and somewhat hurried rush, and in five minutes the compound was cleared.—*North-China Daily News.*

The year just passed (1904) has, like years past, brought to the medical work *Men's Hospital at Lien-chow.* its duties, opportunities and sorrows. The duty and privilege of making Christ known while healing the sick; the opportunity of serving in various ways and showing the humaneness of Christianity; the sorrow of losing from earth those whom we desired to help in the service of Christ and the sadness of heart that there were so few among the many patients who accept Christ Jesus.

The hospital has ministered mostly to those suffering from the common ailments to which flesh and blood are heir, some of which vex both physician and patient by their chronic state. Sad indeed it is to see in what abject poverty, rags and dirt some of the patients live. In many cases nourishing food, as milk, rice and *cod liver oil*, with that great curative agent—soap—does more to restore them to health than medicine. The words of Christ, "The poor ye have with you always," are verified at this hospital.

When to poverty is added that incurable disease—leprosy—which is so loathsome that the victim is driven by his own kith and kin from the village home, pity finds no

fuller outlet. Three lepers, driven from their village, were received during the year. One of these, before leprosy manifested itself, having been cured of ascites, believed and was baptized. A bark shed has been built for their accommodation until funds for more suitable buildings can be raised.

A few improvements have been made in extension and repairs on out-buildings.

The hospital lacks in its armamentarium *chirurgicum* many of the more costly instruments which, though seldom used, are absolutely necessary to the saving of life in special cases.

Two small classes for the study of medicine and dentistry have made some progress in their studies. In the dental class the work thus far has been principally a partial translation of a work on dental medicine.

The Lien-chow Chung Hok Tong, under the auspices of the gentry, have invited Dr. Machle to lecture in Chinese on hygiene.

The religious work of the hospital has been carried on as in former years. Chapel service for one hour in the morning, conducted usually by the hospital preacher and Bible study in the evening.

A blind *colporteur* visits the patients during the day, telling the simple story of the cross, his joy in the Saviour and singing hymns, which he explains. A number of patients have found Christ and have united with the church. All who can read are given portions of Scripture. Many are visited afterwards at their homes by an evangelist specially set apart for this work.

Two new dispensaries have been opened during the year 1904, making now three dispensaries, excluding those connected with men's and women's hospitals.

The women's hospital is in Dr. Eleanor Chesnut's charge. Several interesting cases have occurred among her in-patients.

Correspondence.

DEAR DR. LINCOLN: I am sending with this a set of plans for out-patient and in-patient departments which we are now building in connection with our Hanyang Medical Mission.

It is interesting to note that we have purchased with our magnificent site an old Taoist temple which has stood for many years, the main idol of which is a large image of the god of medicine and surgery called Hwa-t'ao, to whom the poor have come for generations beseeching the dumb idol to heal

their diseases. The temple is coming down now, and on the very spot is to stand a Christian mission hospital, where the poor may not only find relief from their sufferings and healing for their diseases, but will be brought into contact too with the GREAT PHYSICIAN, who is able too to meet their still deeper spiritual needs.

With sincere regards,

Yours faithfully,

GEORGE A. HUNTLEY.

HANYANG, Nov. 15, 1905.

Personal Record.

BIRTH.

At St. John's College, Shanghai, December 1st, to Dr. and Mrs. C. S. F. LINCOLN, a daughter (Marcia).

MARRIAGE.

At Hankow, November 4th, Miss LILLIAN M. JOYCE to P. LONSDALE MCALL, B.A., M.B., both of the London Mission, Hankow.

DEATH.

At Lien-chou, Canton Province, October 28th, ELEANOR CHESNUT, M.D., of the American Presbyterian Mission.

ARRIVALS.

At Shanghai, November 8th, EMILIE BRETTHAUER, M.D., Hanyang, A. B. M. U.

November 9th, Dr. E. H. HART and child, M. E. M., Wuhu (returning).

November 10th, Dr. GEO. F. DE VOL and family, A. F. M., Nanking (returning).

November 25th, Dr. YOUNG, E. B. M.

DEPARTURES.

From Shanghai, November 13th, Dr. ROBERT BORLAND and family, A. P. E. C. M., Wuchang, for Scotland and America.

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Original Communications.

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DIVINE HEALING.

By JOHN A. ANDERSON, M.D.

(Concluded from January Journal.)

FAITH HEALING.

By faith healing is meant the healing of the body, in answer to the prayer of faith, without the use of medicine or other remedy. When remedies are used to assist nature in the work of healing, it has often been found that the most simple ones are the most efficacious. Therefore if any remedy, however simple, is used, the case is not one of faith healing. This should be clearly understood in order to avoid self-deception, because there are many dear Christians who seek to assure themselves that they are simply trusting the Lord for healing without the use of remedies. Yet they are all the time carefully regulating their diet in order to remedy the disordered condition. Of course this class of cases cannot rightly be called faith healing. God is able to heal without the use of a special diet, or a forced rest, or a change of air, or other remedy. He is able to heal any disease or sickness just as ever He was, and there is no reason why He should not do so when He pleases. In all ages He has used this power, and it would be strange if He could not use it in this age. God is still Ruler of the universe, and He has nowhere informed us that He has abrogated His power to heal His creatures in any way that He sees best. In the early church certain persons held the gift of healing, and this gift may still be in existence.

But to say that faith healing is always the best way out of a sickness is to affirm what is not said in Scripture, and is to disparage the variety of God's design and is to assume that we have the right to claim healing in every sickness. It also denies to God the right to bless, for the healing of His consecrated children, any of the numerous remedies for sickness that He has placed in the world for our use, and it forbids us to use those remedies which God has in infinite wisdom and love provided for us.

It is as wrong to assume that we must be healed without the use of medicine as to assume that we should live without food. God is able to sustain us without either food or medicine, but He wills otherwise, and has given us richly all things for our well-being.

ANointing WITH OIL.

In the land of Palestine, and in many parts of Asia and Africa, anointing with oil is practised for the prevention and cure of disease. In Europe and America, although not so commonly used, the anointing of the body with oil is not infrequently prescribed by physicians.

Anointing with oil is one of the oldest forms of medical treatment. It was in common use in the Holy Land before the times of Christ. Our Lord and the apostles were familiar with the practice, and Christ Himself was upon different occasions anointed.

Anointing is an ideal method for giving medicine, because it avoids disturbing the normal work of nutrition carried on by the alimentary canal. It makes use of the thousands of little mouths scattered all over the surface of the skin and reaches the system—the blood, flesh and bones—quicker than when given by the mouth. Not only oils and ointments, but plasters, poultices, liniments and other applications to the skin have as really a medical value as drugs given by mouth, or by hypodermic syringe.

Some of the oils and ointments were used as cosmetics, others were useful for the prevention of the neuralgia and rheumatism so prevalent in Palestine and neighbouring countries, and others were deservedly famous for the prevention of putrefaction, and are excellent disinfectants and antiseptics.

Every Jew in the time of Christ was familiar with this form of medicinal treatment, and the command to anoint with oil as in James v. 14, 15, was entirely in keeping with this practice. Had it not been the remedial use of the oil that was intended we might expect to have an explicit statement about this; but there is no such statement. The prevalent remedy was the anointing with oil, and this was to be done,

but the healing was to be asked from God, and in answer to the prayer of faith the Lord was to raise up the sick one.

The book of James is addressed to Jewish Christians scattered among Gentile peoples. Each scattered Jewish community had, as a rule, its synagogues and its elders, but the Christian Jew was excommunicated from the synagogue and from all its privileges. Not the least of these privileges was the sympathy and help of the Jewish elders in times of sickness. To meet such a state of affairs James wrote, "Call the elders of the church." Thus the young Christian church was strengthened and kept from the contaminating influences of heathen physicians and their magic arts.

DIVINE HEALING.

"This sickness is . . . for the glory of God." John xi. 4.

"All that God blesses is our good,
And unblest good is ill;
And all is right that seems most wrong,
If it be His sweet will."

Disease is not a mere theory. It is a visible, omnipresent reality. None of the human family escape its ravages. No rank, or class, or kind of people is free from its onslaughts. Saints and sinners, Christians and infidels, hoary age and innocent youth, all come under its terrible power. The grey hair, the wrinkled skin, the decaying teeth, the failing eyesight, the suffering humanity, attest this fact.

Most mercifully disease is turned by God into one of the most potent agencies for the conversion of sinners and for the sanctifying of saints. Many besides the Psalmist can say: "Before I was afflicted I went astray, but now have I kept Thy word." To many Godless and thoughtless men and women a sick bed becomes a pathway into true wisdom by compelling the consideration of their latter end. Christ taught men to be willing to endure physical sufferings rather than lose their souls. Mark ix. 43-47. When the goodness of God fails to lead men to repentance it would be strange indeed if God in His wisdom and love did not use sickness and suffering to accomplish this end. Scripture as well as personal experience abundantly prove that it is so. Sad to say some who are brought through most excruciating sufferings yet refuse to repent. It is foretold of some who, in the midst of the most awful Divine chastisements that earth has ever seen, are to gnaw their tongues for pain, but to refuse to turn from Satan to God. Such cases are terribly sad, yet they unanswerably vindicate to mankind the righteous judgment of God. The situation remains as of old, "We piped

unto you and ye did not dance, we wailed and ye did not mourn. . . . And wisdom is justified by her works." Matt. xi. 17.

There is disease whenever a person falls below the normal state of health. This is often caused through breaking some law of health. A person may do this unintentionally, but the result is none the less inexorable. A few examples of this may be given.

An insufficient supply of food or air will cause anæmia. Unripe or over-ripe fruit, or other improper food, or food improperly cooked or bad air are common causes of disease; so also are over-exertion and lack of exercise and over-exposure to heat or cold. Even the moderate drinking of spirituous liquors frequently causes disease of liver and kidneys. A striking example is found in a man who takes a hammer to strike a blow, but misses the object and strikes his own thumb instead. The bruised thumb is none the less bruised and painful that he was innocent of any intention of injuring himself. God made the laws of health, and it is for man to conform to them. If we break these laws it is at our peril, and we must suffer for it.

Disease is also caused through personal contact with persons suffering from certain diseases as small-pox, and diphtheria, or with clothing infected by them. Scarlet fever may be conveyed by letters from the sick room of people suffering from it. Bites of infected mosquitoes cause malaria and yellow fever. Other insects convey the infection of spotted fever, sleeping sickness and other diseases. Hydrophobia is communicated by the bite of animals infected by rabies. These are a few examples of the many ways in which man is attacked by disease.

The facts of life show that during the whole period of man's existence he is dependent on the physician's skilled assistance. Our life history, from birth to death, is one unending succession of demands for such assistance. At birth there are many cases where the child's life, and not infrequently the mother's, can be preserved only through some one to act as physician. Every male child in Israel had a surgical operation when he was eight days old.

Bruises, burns, sprains, malformations, fractures and dislocations are every-day visitors of the physician and surgeon.

Divine healing is a much misused term. It means the healing of the body through the putting forth of the Divine power. This may be done while the sick one is carrying out the divinely appointed method for healing or otherwise. God is a sympathising Father, and He deals with us in grace. "Like as a father pitieth his children, so the Lord pitieth them that are His." He gives rain and sunshine to both evil and good, so also He bestows bodily healing on both obedient and disobedient,

according as He in infinite wisdom sees fit. But even if a divinely appointed method is employed, God may not give the desired healing. On the other hand, even if we, through some misconception or misunderstanding, do not act in God's appointed way of healing, yet He often graciously bestows healing. Thus we find people being healed in every possible state of existence. Some even recover from sickness although living in the most insanitary surroundings and although guilty of breaking every known law of health. But God markedly blesses the very simplest efforts to conform to His laws of health. A few years ago I read a report of a hospital where no medicines were administered, but where diet, fresh air and cleanliness were the means used. It showed good results for this treatment. Many of the sanatoria for consumptives are conducted very much on this principle, and they show very good results. Hydropathy, electricity, massage and other forms of treatment have excellent results in certain diseases for which they are suitable.

"Every good and every perfect gift cometh from the Father of mercies." The gifts are all perfect as they leave His hand, and they are still good even when they pass through the hands of human clay. The physician's highest aim is to be a co-worker with God. While searching the universe for medicines to cure and relieve human sickness he recognises that he is but a dispenser, yet a favoured dispenser, of some of God's most valuable gifts to His own suffering brothers and sisters. Wherever these remedies are found, in the shady forest or on the mountain side, sunk in the ocean depths, or hid in the bowels of the earth, shining in the sun's rays, or floating on the ether wave, all alike come from the bountiful hand of the Father of mercies. The self-styled Divine healing which denies the right of this term to any case where medicine is employed is a usurper. God is the Healer, whether He employs a human agent or not, whether He sends healing through a prophet or a physician, and whether He uses medicine or other means or not.

The Divine provision for healing is practically infinite in its variety; but a survey of God's dealings with man in the different ages of the world shows that, as a general rule, He has appointed means to be used for bodily healing.

Looking at an age that is past, and at another age yet to come, we can have no difficulty in seeing the operation of this general rule.

In the age of innocence the divinely appointed means for the prolongation of life was the tree of life. Gen. iii. 22. In a coming age the leaves of the tree of life are to be for the healing of the nations. Rev. xxii. 2.

Nor is the present age an exception to this rule. The Israelites were divinely ordered to provide isolation hospitals for lepers; and directions were given for the diagnosis and prophylactic treatment of this disease. Leviticus xiii. 14.

In the Old Testament there are references made by the Holy Spirit showing incidentally that physicians and medicinal remedies were recognised as being necessary for the welfare of the Israelite. "Is there no balm in Gilead; is there no physician there?" Jer. viii. 22. "Mollified with ointment." Isa. i. 6.

These references concerned spiritual healing, but this was made analogous to bodily healing, thus teaching that as a physician and medicine were necessary for the sick body, so the Great Physician and His soul medicine were necessary for the sin-sick soul. And it is well to observe that the custom of using means for bodily healing, thus incidentally alluded to, is not condemned, but is tacitly sanctioned through the allusion that is made to it. The well-known use of alcohol in cases of extreme prostration or collapse is recommended in Prov. xxxi. 6, "Give strong drink unto him that is ready to perish." The universal utility of medicine is referred to in Prov. xvii. 22, "A merry heart is a good medicine."

A general rule thus being recognised we are able to note striking exceptions to it, as in the case of the Israelites when bitten by the fiery serpents, the healing of Naaman the Syrian, and other cases of miraculous healing—all given in special circumstances and for a special purpose. But although, as a rule, means were used, the mind of the Israelite was ever pointed away to the Great Healer by the necessary sacrifices and by the rigid ritual commanded for judicial cleansing, in the case of the constantly recurring sicknesses of the people. How they failed to learn this lesson, and trusted in man instead of God, and turned to the gift instead of the Giver, we find in such cases as Asa, who "sought not to the Lord but to the physicians." 2 Chron. xvi. 12. Very different was the case of Hezekiah as recorded in Isaiah, ch. xxxviii. When warned of the prophet that he was about to die Hezekiah turned in prayer to God and asked for healing. God promised to restore him to health and to give him fifteen years longer of life; and the prophet Isaiah instructed that medicine be used by applying to the boil a well known remedy—a plaster or poultice of figs (*Ficus casica* of the pharmacopœias Britain of and U. S. America), and then followed the desired result.

In the New Testament we find the same incidental allusion to the need for physicians and medicinal remedies, and along with this we have the positive declaration of Christ that they who are sick need a

physician. Luke v. 31. There is the Apostle Paul's prescription of a stomatic for Timothy, "Use a little wine for thy stomach's sake and for thine often infirmities." 1. Tim. v. 23. The word "use" indicates a desired result, and to attain this result means were to be used. Food is used to nourish the body, so medicine may be used to assist the body in assimilating the needed nourishment from the food. Medicines for this purpose are often prescribed by a physician, and supplied by a chemist, but they are also constantly used in the form of aromatic spices, mustard, sauce, ketchup, vinegar, wine or other appetising preparations. In whatsoever way presented we receive these aids to digestion, as good gifts to those needing them, from God's great laboratory.

IN CONCLUSION,

it may be well to recall some of the facts that we have been considering.

It is evident that Satan is sometimes permitted to bring sickness and suffering upon God's people. The cases of Job and of Paul show this to be so. They likewise show that such sickness and suffering are among the "all things that work together for good," and that it is not always God's will to keep His people from sickness and suffering even when such is inflicted by Satan. It has also been abundantly proved that God has Himself sent disease and suffering to His own people, and in every case this has been in furtherance of their own best interests. God has also repressed evil and punished sin by pestilence, disease, and death. The people of God have the Divine assurance that they are constantly guarded by Omnipotence. "He hath said, I will never leave thee. Therefore we may boldly say, the Lord is my helper." Nothing can touch the child of God unless permitted by our Divine Guardian.

We seek to escape sickness and suffering, and it is a law of human nature that we should do so. We can understand that sickness and suffering are intended for our good, and yet seek to escape them just as much as we understand that thorns and thistles are a blessing by compelling man to toil and labour for food, and yet at the same time we destroy them.

We appreciate that thorns and thistles are our friends in disguise, yet we do not therefore cultivate them. We appreciate that sickness and suffering are blessings in disguise, yet we do not therefore desire them.

"Through many tribulations we must enter into the kingdom of God."

Tenderly would we repeat that God does not intend His people to pass through the world free from suffering. The redemption price—the world's redemption price—has been paid in the death of the Son of God. His rightful place is on the throne of the universe; but the world has rejected Him, and rejects Him still. He is sitting at the Father's right hand waiting for the time when He can occupy His rightful place. While He waits, it is God's will that this earth and all upon it should groan in pain and suffering for the coming of that time. This subjection to pain is absolutely righteous, and it is also good, and is undoubtedly the very best discipline for terrestrial beings. Nor are the saints in heaven exempt from the restrictions imposed on us during the waiting time. Although triumphant with Christ, which is far better than warring on earth, they are not permitted to enter into their complete redemption—the redemption of their bodies. When Christ, in anticipation of His coming to reign, comes in the glory of His Father and of the holy angels and gathers all His people to meet Him in the air, the great event will be accomplished. Christians from earth and saints from heaven will meet in glorified bodies, a first fruits of the complete redemption.

Soon thereafter Christ will take His place and reign for the thousand years. The restitution of all things will be effected. That is to say, the earth itself, with its freight of animal and vegetable life, will be released from the curse of Adam's sin and introduced to the bliss and peace of redemption privileges, making the millennium, with its peace and gladness, like a second Garden of Eden to tired, suffering humanity.

But we are anticipating, and must retrace our steps from that longed-for era of blessed glory. Enoch and Elijah may be mentioned as exceptions to the rule that saints in heaven have still to wait for their redemption bodies. So also there are exceptions on earth to the general rule for sickness and suffering. When Christ was here He manifested His power over both disease and death. In the early church these miracles continued. An apostle's shadow cured the sick. In answer to his prayer the dead was raised. There were signs and wonders. People tasted the powers of the age to come, and it would be strange if people could not taste of its powers as the approaching age draws nearer. Yet even Paul had to leave Trophimus sick. Could he not have healed him? Might he not also have healed Timothy from his chronic malady rather than prescribe that stomachic for him? And Gaius, why did not Paul heal him? Why? Doubtless for many reasons. Yet one is sufficient. God never does for man what man can do for himself. Very remarkable, too, that a man's soul may be all right while his body

is all wrong: "Beloved I pray that in all things thou mayest prosper and be in health even as thy soul prospereth." III. John 2.

But Paul had a weakness of his own, for which he had prayed, and it was not God's will to heal him. It was better for Paul to be kept weak, because he was thus kept more dependent on God. When he was weak then he was strong. It was something like this. Paul got a wondrous revelation. It gave him almost, if not quite, superhuman knowledge. For a time Paul was in danger of getting elated and being proud through possession of this knowledge. Satan did not know everything, but he knew that Paul was a good soldier of Jesus Christ. Satan often tried to slay Paul. This time he fired a shaft with the intention either to cripple or kill. God saw that it would keep Paul from getting proud, so He allowed the shaft to strike him, and it was there crippling Paul all through his life, but it served God's purpose. It kept the great apostle humble; so Paul near the end of his days said: "Most gladly therefore will I rather glory in my weaknesses that the power of Christ may rest upon me."

After a wondrous revelation Daniel also fainted and was sick certain days. Dan. viii. 27.

The Jewish Christian exiles, debarred from the official services of the elders of the synagogues, called the elders of the church; and these Christian elders were authorised not only to pray but to use one or more of the many kinds of oil constantly employed by the Jews for curing different disease.

Our Divine Lord, as man, lived a life of perfect dependence upon the Father. In every herb and every tree He saw a gift from God to man. Gen. i. 30.

The highest commendation that He uttered was concerning the woman who in view of His approaching death anointed Him with the costly nard—a germicide to prevent putrefaction. Both by precept and example He taught His followers to use a physician and medicine.

ADDRESS TO WOMEN MEDICAL GRADUATES, WOMEN'S MEDICAL COLLEGE, CANTON, 1905.

By ANDREW H. WOODS, M.D., Canton Christian College.

You are to-day to enter into the life and duties of doctors. If you were about to become queens, I would congratulate you and wish you great usefulness and happiness. But you are to become doctors, and for that very reason I congratulate you more cordially; for no women

on the earth have more opportunity for useful, patriotic service, and so for deep happiness, than now lies before you.

I once saw a fine gold ring which was marred by the absence of its jewel, the jewel having evidently been lost, for the empty setting was there. Instead of being beautiful and pleasant to look upon, the ring made an unpleasant impression on me. But as I was leaving the room something in a far corner caught my eye, and going to it I saw at once from its size and shape that I had, by mere chance, found the missing jewel. Your country and people need you, and are defective without you. Like the ring of fine gold this country of yours is a beautiful land, and its people are a strong natured people; but they are sick, suffering and in need of comforters. Anyone walking through your streets and looking into the faces of the women as he passes, can hear their hearts crying for true, educated, unselfish women to come and not only heal their bodies but comfort their souls. I found my friend's diamond without an effort; and just so no one claims credit for recognizing as he looks upon you young women to-day that you may become, if you will, the jewels of this great country, to fill out its beauty and make it a lovely land to all who look upon it.

To-day is called your commencement day. This is because you are about to set out upon a long journey. Not all who set out upon this road reach the end, for in Europe and America, of the many thousands who commence to practice medicine, only a very few become real physicians; less than half, I believe, even earn a living—perhaps not one in one hundred becomes what a doctor ought to be—not only a completely equipped healer, but a complete man as well. It is a long road. It has many steep hills, many sloughs of despond, many broad and easy roads leading off from it to tempt you to abandon it. But as we have all met here to-day to start you out upon this road, and wish you God-speed, we all point forward to the goal at its end and hope that you will persevere until you every one attain it.

I have been asked to-day to give you some parting directions that may make the road plainer to you. But I know that not every one who has passed over a section of road is made capable by that fact of directing others how to find their way along it. Indeed very few people have the faculty of directing strangers over a difficult road. Usually you are told that you will pass this and that conspicuous point, but this does not help you when you come to a cross-road and on neither side see any of the conspicuous points mentioned. It seems to me the best way to direct a stranger is to imagine that you yourself were going over that road again, and as you come to a confusing place stop

and describe it to him, making plain which way he should go and which way he should not go. Make a distinct picture in his mind of every such place that might confuse him, so that when he comes to such a place he will always remember it and recall how you told him to go. If you can thus keep him from going the wrong roads of course he will at last reach the proper destination, provided he keeps moving.

So to-day, as you start out upon your life's journey as doctors, I am not going to recite to you the joys and triumphs that you will meet. These you will recognize easily when you come to them, and they will cause you but little confusion. But I want to speak of at least four points along this road which I have already come to myself—points that I think will be perplexing, and that have already caused many physicians to leave the road and wander into other paths. Possibly as we think of them now in advance we may be able to make some rules to guide ourselves, so that when we reach them we shall recall them and remember which is the road that we are to follow. The four points of which we are to think are :—

- (1). The broad field of QUACKERY.
- (2). The tortuous bypath of COMMERCIALISM.
- (3). The overgrown path finally lost in the thicket, ATROPHY.
- (4). The small footpath of NARROWNESS.

QUACKERY.

During the first few months of the journey that lies before you there will seem to be no road at all; but all will seem like a great and endless field with no track and no boundaries. As you have been going through the regular course of instruction in this medical school you have seen that each day's work had been planned before and that the entire course lay before you like a distinct path. You doubtless thought that all through your life as a physician your work would be just as distinctly laid out. But I fear during the first months you may come to feel that instead of having a clearly defined road on which to walk you are in a great field of confused facts, symptoms and diseases, with great responsibilities to bear, and yet no definite rules as to how they should be borne. You may often wish that the work of a doctor might be as distinctly laid out as was the work of a medical student. You will feel that you are in a great field without a road to guide your feet. But remember that your first duty is to find that road for yourself. There is a road there, although you may not see it at first. It is possible to wander around all the rest of your life in this confusion

without finding the road, but it is certainly there, and you can find it if you seek it in the right way.

When I examined my first patient I found that I had to be omniscient. I am afraid now to tell you how little I knew of her case, and I am sure I did not tell her. But I had a strong feeling that the only way to save my face and to keep her in the chair was to pretend that I knew all about her, and indeed all her ancestors. I felt that I must talk and act as though I usually had six or eight cases exactly like hers every day, and that I had never yet failed to cure them all. This sort of thing comforts the patient, for all of them like to be fooled, and the more you fool them the more they will patronize you. This is the experience of every doctor, not only at first, but often the same feeling of ignorance and the same temptation to assume omniscience will come up in later years of practice. Part of the experience is unavoidable, and so cannot be prevented. But to assume full knowledge and to give medicine before sufficient comprehension of the case is had, this is merely wandering in a vacant field; your feet are on no road and you are sure to get lost. This is quackery. But how is a doctor to avoid it? In the midst of the embarrassment and confusion how should he act?

While you were studying medicine you have learned many names, memorized whole tables of symptoms and tried to get some meaning out of many books. It seems like a very complex science, and indeed it is complex. But when you sit at the bedside it is not necessary to try to review all the books you have studied and review all the possible diseases that the patient might have. Out of all that you have studied two mental instruments have been formed: one is diagnosis, the other is therapeutics. The former has grown up in your mind through the study of pathology, and it enables you to examine a patient and find which organs in her body are failing to do their work. In fact it is a good plan to take out a piece of paper and write down just these things before you attempt to give any remedies. The second instrument, therapeutics, you have gotten by your study of remedies. By remedies you mean drugs, electricity, rubbing, bathing, etc. You know what effect each of these remedies will have upon each of the organs in the body. So having written down in a given case which organs are in need of help, you now can select remedies that will give just that help. You are now ready to act intelligently in clear light. Perhaps you found three organs at fault. You think of a remedy that will help the first, but on thought you see that it will hurt the second. So you would not commit the blunder of using this remedy. But by careful thought you will find

some means of helping the necessary organs without damaging any. For instance here is a man in the second week of typhoid fever, with high fever and weak heart. At once you say the first indication is to lower his temperature ; and you think at once of *antipyrene*. But on second thought you say : No, this heart is too weak for such a depressing drug. So you use cold water baths and give *strychnin* and whiskey by mouth. Here you have found your road. The case seemed confusing at first, but by care you have found a path to follow in treating it. Quackery means giving remedies before finding specific organs that need definite kind of help, and before you are sure that the remedy used is able to give that help without doing damage. To guide ourselves out of this broad field of quackery let us each nail up at its entrance this sign-board :—

- (1.) In every case search till we know which organs in our patient need our help.
- (2.) Then think quietly—for days, if necessary—till we find remedies that will give just that help without any damage.

COMMERCIALISM.

A medical student who steadfastly sets his eyes upon wealth is like a man who tries to walk along the top of a narrow wall while fixing his eyes upon the moon. The desire for wealth is likely to diminish your powers as a physician in several ways. One is by leading you to prescribe drugs when you have an interest in their sale. In America and England the best medical associations will not admit a doctor to membership if he has any financial interest in the sale of medicines. If it is necessary for you yourself to provide medicines for your patients it is best to ask only such a price for them as will just pay their original cost. If you charge more you are tempting yourself beyond what the strongest men have been able to endure. You will soon find yourself prescribing drugs for your patients according to their price and not according to their efficiency. A doctor's sole aim must be to know what is the trouble with his patient and to find the best method of removing that trouble. To do this memory and judgment must not be confused by any outside considerations.

Another snare that love of money sets for doctors is in the matter of fees. He has a right to a fee in proportion to his skill, and a patient should give this much gladly, for where life is being saved or made more enjoyable money is of no moment. A good doctor can never be paid enough to balance his patient's obligation ; but a good doctor will not desire to be paid enough. He is willing to treat the poor for only what they can give, and to put the same amount of study and care into their

treatment as though they were to pay large fees. Those who can pay, but are too mean to pay, he should rebuke and refuse to treat, but not because he desires their money, but to help them overcome a moral fault.

The study of medicine and book-keeping for some reason do not agree. For this reason the doctor is happy who can spend his life working in a good hospital with a fixed salary sufficient for food, clothes and books. Or, if he has a private fortune, and can work for the sick without thinking of money, thus concentrating his entire mind upon his study and work, his lot is ideal. We who must in some way find food to enable us to continue our work must fix some sort of values to the service we render, but it should always be proportionate with the estate of the patients and as much for their good as our own. We must be content to live simply, work zealously and be happy with just enough to enable us to pursue our work with the greatest efficiency. Only such can become real students of medicine.

Many doctors are rich. Some good doctors are rich. But it is easier for a camel to go through the eye of a needle than for a man who cares much for wealth to become a good doctor. This is a hard saying. Who can hear it? Perhaps some of you have ears and will hear and remember it.

ATROPHY.

As we walk along our way as physicians there is danger that we will all allow the crowds of sick to so press upon us that we will be crowded back off the main road and into a narrow, overgrown road that leads into the thicket of ignorance and finally disappears. It is the path of atrophied mental power. When you leave the medical school your mind feels like a luxuriant vine. In every region of medical thought you have had something of a start, like the buds of a vine that start out and are ready to grow in any direction. You found anatomy, physiology and chemistry of fundamental importance, and you determined to always keep in touch with them as a vine does with its mother earth. Surgery, practice, therapeutics and pathology are like the great main stems through which all the sap must rise, so you said a close connection must always be maintained with these.

The fact is that study is essential. Your study in the medical school is only like learning to finger the index of your text-books. It only shows you how to go about studying disease, how to examine cases, where to classify them and how to think about them. The chief study now lies before you, and a delightful study it will prove. The

real medical education commences to-day, and will continue and become perfect through the long years of practice by days of patient visiting and nights of thought. When we say we are too busy to study, we are like the laborer who says: "I have no time to eat, my work is so pressing;" or the steam engine that would say: "My running is so constant that no time is left for taking on coal and water." We must find time. If need be limit the number of patients, but make it a point to have at least one hour every day for careful thought over the day's cases. Otherwise our powers will commence to atrophy and in the end we become mere machines, incapable of contending with new conditions and meeting emergencies. And machines wear out, always becoming less and not more efficient.

What do you mean when you speak of a successful doctor? Is it one who is growing wealthy? The quacks in America are the ones who grow wealthy most quick. Is it one who sees the most patients? I have seen patent-medicine venders who treated more patients in a day than I ever hope to see in a week. The successful doctor is the one whose powers of diagnosis and treatment are growing day by day better. He is the doctor who really cures his patients. This power to cure comes only through study; and the habit of study should be gained during the first years of practice.

I want to suggest the following method of study:—

(a). Fix your determination to study at least one hour every day. Three would be three times as good.

(b). Have some sort of convenient note book, and never examine or treat a case without making some notes on it, enough to enable you to remember the chief points of the disease. When your study time comes, take out these notes and look over them thoughtfully. Get down your best books and medical papers and compare your case with those of other doctors. In this way find out what mistakes you made during the day, what better method of treatment you might have used and write down the result, to guide you when next that patient comes to you.

(c). Some day, if you wish it, I would like to show you a plan by which with very little trouble and expense it is possible to keep permanent records of all cases you ever treat and permanent references to the best books and papers on any subject you may have read. Or, if a patient returns after even twenty years, you can easily turn to her former sickness and see just what disease she had and how you treated it.

But by this method, or by some other better method that your teachers could show you, it should be your determination to keep such

records. Some system of this kind will make all the study of your life uniform, and such study will become more and more profitable to you each year. Your patients will thus have the benefit not only of your wisdom and skill, but the accumulated wisdom of the best doctors in the world. The doctor who has thus learned to study will have as his partners the best physicians of all countries. That is a strong firm. Let us all enter it and become active partners, for we may if we but choose to do so.

NARROWNESS.

Many doctors leave the great high road of generous, thorough-going practice and all their lives walk along a narrow footpath on one side of the road. I wish you all could read some of the story books written in English which set forth the noblest pictures of what a doctor's life and work ought to be. It is a beautiful thing to think of a man becoming the warm-hearted friend, advisor and comforter of a whole city or country side. The doctor who limits himself to patching up the worn-out bodies of men is not a great deal higher than the tailor who patches their coats. His fees may be larger, and the value of the thing patched may be greater; but when once the trade is learned the quality of thought may differ but little in the two cases.

We owe more to our patients than to do simply what they pay us for. Even a tailor feels a sort of interest in the man who wears the coat made in his shop. If the patron loses all his fortune the tailor is likely to feel a genuine sympathy. Even the most grovelling physician feels the beginnings of this higher interest in his patients. For instance, I cannot think of even a quack who would not feel mean if by giving drugs to relieve a patient's pain he has introduced the man to form a drug habit. We desire to diminish pain, and rightly. But if *morphin* will relieve the temporary pain at the cost of transforming a weak woman or man into a *morphin* habitué, it were better to allow the patients to suffer. As a doctor, you are paid to stop the pain; but as a friend, you consider the character as of more value than even permanent comfort.

I am glad to say that doctors now all over the world are actually trying to prevent sickness. Their fees depend upon the continued existence of sickness; yet they are trying to show, both poor and rich all over the world, how to live so as to be always strong and healthy. This seems like killing the horse that carries you. What does it mean? Simply that doctors are doctors because they desire to free the world of suffering. This is a higher motive than the desire to win fees. Here

in South China we have opportunity for a lifetime of such educative work at this. As a small example, thousands of people are dying here of typhoid fever, dysentery and similar diseases simply because they are ignorant of one fact. That is, that these diseases are carried from one person to others wherever vegetables are fertilized by the filth from our houses. You now know hundreds of vital facts of this kind concerning hygiene, exercise, cooking and housekeeping, and it is the privilege of your lives to spread abroad this knowledge in every way that you can command. This is a broader life-work than to practice medicine for fees, caring nothing for the general welfare of the whole people.

There is yet a higher way in which you can help your patients, for bodily pain is of little importance as compared with pain of the heart, and much of this heart sickness there is within rifle shot of this house. Since this worse sickness often attends bodily sickness, you as doctors will most often have opportunity to see it. By generous sympathy of manner and conversation you will soon show your desire to comfort as well as heal, and patients soon learn to look up to you and trust you in many matters other than sickness. Try to be doctors of this kind, and from you as centres will spread not merely health and cleaner living, but peace and comfort to hearts that could never have known peace but for you.

Again, simply because you are a doctor you will more than any other women see the sick just before they pass from the field in which your efforts can help them into the region of mystery which we call death. They are timid, and fear to leave friends and the familiar world to enter what seems a world of unknown darkness. It is the doctor who sees this transition most often. If he has been a true man as well as a doctor he will have done all in his power to heal and comfort the patient throughout life, he will have tried to stimulate character to greater strength and beauty, simply because he had the opportunity to come nearer the patient and so gained a greater influence for his good.

But now a change is at hand about which medical books have little to say. Much is said and written about it, many guesses ventured under both religious and non-religious motives. But since he has to face it, a doctor owes it to himself and his patients to at least be no trifler in his thoughts upon death and eternity. He has no right to be either lazily orthodox, trusting in creeds worked out by other men, nor can he be a shallow opposer of creeds. Whatever he has come to consider true, he must have fought for his faith and earned a right to hold it.

Happy is the doctor who has passed the stages of parasitic faith and of imitative skepticism and has come to know that the Creator of this world still has relations with this world—yes, the relation of Father to all men in it. Twice happy he is if by purity of heart he has come to know that Creator as his own Father. And happy the patient who in his last hours can have such a man and doctor as his friend. May every patient of yours have such a doctor.

MEDICAL AND SURGICAL NOTES.*

By R. T. BOOTH, M.B., B.Ch., Hankow.

MEDICAL.

Under the head of fevers I wish to make a few remarks about the forms of malarial fevers which are frequent in this centre, at least this part of it which our hospital taps. For some three years I have in nearly every case examined the blood of the patients coming complaining of "p'i-han." Both clinically and microscopically the vast majority of those have been quartan "kan-liang-t'ien." I found on microscopical examination that their cases usually showed the characteristic pigment in color, shape and movement, and that the corpuscle was not much larger, if any, than the ordinary red blood corpuscle. In stained specimens the shape, color, etc., all bore out this same diagnosis.

Very few cases of quotidian fever or tertian ague have come. In one case of quartan (undoubted both from clinical and microscopic appearance) I found a crescent present, showing that the case had been an old one of quotidian or malignant tertian on which a quotidian infection had been grafted.

I have never had an undoubted case of malignant malaria under my care. One patient, whom I suspected of being such a case, died shortly after admission, in fact during admission, and it was not advisable to draw off any of his blood for examination after death. The history of this case and its progress all pointed to malarial meningitis, but without a *post mortem* I do not feel warranted in making a positive diagnosis.

I shall be glad to know if others have found, like myself, this great predominance of quartan over other forms of ague, or whether we are peculiar in our situation.

* A paper read before the C. C. M. M. A., April 12, 1905.

Lung, Malarial Affection of.

Dr. Hodge some years ago reported a case in the MEDICAL JOURNAL of a lung case which seemed undoubtedly malarial. One similar came under my notice some years ago. It took the form of a general catarrh of the lungs, with fever of a periodic type and refused to clear until the patient was put on *quinine sulphate*, gr. v., t.i.d., and in a very short time the temperature was normal and the lungs clear.

Case of Subcutaneous Hemorrhage from Veins in Anasarca.

A patient was brought in one day in a very advanced stage of general anasarca, abdominal cavity full of fluid and lower extremities very œdematous, skin distended almost to bursting, scrotum very distended. The peculiar feature, however, of the case was the subcutaneous hemorrhage which had taken place from all the superficial veins, from the dorsa of the feet to the groins, mapping out the superficial venous distribution just as if the veins were injected with carmine.

Under treatment the patient got well, but even when he left the hospital there still remained some of the hemorrhage unabsorbed. I mentioned this case before to you; since then I have received no light on the matter. I have often seen cases of œdema just as bad, and we have all seen ascites abdominalis tense to bursting; the veins standing out like blue lines, but I have never seen hemorrhage before or since. The patient had no hemorrhage from the gums or bowel and no petechial or purpuric patches, so I think scurvy and purpura can be excluded. What was the condition due to?

Cholera.

The epidemic of 1902 made me draw up certain resolutions in regard to treatment which I intend to follow in similar circumstances.

1st Stage.—Opium, asafoetida, and pepper.

2nd Stage.—*Calomel*, large dose, gr. x., followed by two or three grains every hour for twenty-four to forty-eight hours, combined with piperine.

High enemata for two purposes.

(a) Cleanse the bowel and act as astringent.

(b) To supply fluid to the blood for that purpose use (1) *tannic acid* dr. i to pt. i. and (2) 7½ % saline solution which is left in. Poultices on loins to promote action of the kidneys. Intravenous injections of saline solution up to four or five pints. Blisters over the neck for vomiting. Cold water bandages on limbs.—*Niemeyer's Treatment.*

In connection with this cold water bandage treatment I should like especially to mention one case. The patient was brought in one evening in the collapsed condition. I had been so exhausted by other cases that I was physically unfit to personally transfuse, and as the patient

seemed almost beyond help I gave orders to simply give him *calomel*, gr. x., and to put a hot poultice over his loins and then swathe him from head to foot with towels wrung out of cold water, constantly changing them. The result was wonderful. The patient came round all right and got quite warm and comfortable, the dreadful restlessness ceased, and when I went in the morning, expecting to find him dead, I found him on the way to recovery, having passed urine. He went out in a week quite well.

SURGICAL.

(1). A man was brought into the hospital one night from one of the prisons, having cut his throat a couple of hours previously. On examining him I found a small mark about three-fourths of an inch long on the right side of his neck over the jugular vein, but as there was no further hemorrhage and the man was moribund I did not examine the wound further. He died within an hour. He had deliberately cut his throat with his thumb nail, sawing and scraping away with it until he had severed something which bled severely enough to satisfy him that he had gained his end, which was suicide, to "save his face."

(2). Another case of neck wound which turned out more satisfactorily for all concerned, was that of a man who was stabbed in the root of the neck on the right side. He lost a considerable amount of blood, but as no further hemorrhage occurred after his coming in I did not interfere with the wound beyond cleaning it up. The knife had entered between the heads of the sterno-mastoid and had gone directly backward inward, judging from the position a probe took when I put in a gauze drain next day. How the carotid escaped I cannot say. The man lived.

(3). Stab in the chest between the fourth and fifth ribs, right side, air coming out on inspiration; cleaned and sutured, healed by first intention.

While talking of cases which show the indifference of the ordinary Chinaman to injuries which would undoubtedly end fatally to a foreigner, I may mention two cases.

(4). Two men from Wuchang walked into the out-patient department. They had had a fight the night before, and the soldiers had interfered and cut them over the heads with swords. One man had a cut some five inches long in the centre of his head, running from before back, exactly over the sagittal suture. It had bit deeply into the bone, and judging by appearances seemed one-half way through.

The other had two wounds: one on the right and the other on the left side over the squamo-parietal suture. One wound had practically lifted up the squamous from the parietal. I put them to bed. There being no symptoms pointing to damage of the brain, pupils equal, reacting to light, no paralysis or fits, I merely dressed them antiseptically.

To my surprise both men never had even a headache and no rise of temperature, and I could not keep them in bed after the first day.

They went out soon after and came in a short time to "sung" me a "pien," singing my glory and handing their names down to posterity as well.

(5). *Aneurism*.—With two at least of the three great predisposing causes of aneurism I have often wondered why we do not see more cases out here. In the six years I have been out I have only seen four cases among the patients. One was a case of aneurism of the arch of the aorta which had perforated the sturorum and was of course inoperable. The second was a case of aneurism of the subclavian shortly after leaving the innominate. I feel glad for some reasons that the man did not return after he had gone away to "san-liang" about operation!

The third was a subclavian aneurism on the right side.

The fourth was a popliteal aneurism. A boatman came just about a year ago complaining of a tumor on the back of his knee. On examination I found an aneurism about the size of a small orange in the popliteal space. No doubt about the diagnosis all the cardinal symptoms were there, so the only question was treatment. The man said he wanted to be operated on, as he found it impossible to "tang" his "hwatz," as the constant bending of the knee necessary in that work rendered him useless owing to pain. At first I anticipated the operation with some degree of professional joy, but when I came to refresh my memory with the literature on aneurism I did not feel quite so happy. As regard the experiences in Central China I found that three cases operated on in the various hospitals all had died. However this man was willing to take the risk. I pointed out to him clearly that his leg might become gangrenous and then only amputation high up could save his life, and that even such a procedure in many cases failed to attain that end. I operated, choosing the superficial femoral at the apex of Scarpa's triangle as the site of ligature. I ligatured with silk and sutured the wound with interrupted gut sutures. Pulsation ceased immediately I tied the ligature. The leg was bandaged from the toes up in warm cotton wool and put on a splint. Hot bottles were placed

around the limb, and no more being possible I spent the next forty-eight hours most anxiously awaiting results. I am glad to say it was a complete success. The circulation was maintained by the collateral supply, the limb remained warm and all went well. I kept the patient in a month; the tumor gradually shrank and no sign of pulsation ever returned to it. Why is it that with syphilis, and so common, we see so comparatively little aneurism? Have you seen cases of endarteritis obliterans or similar changes in vessels which are so common at home in syphilitic patients?

(6). As I am on the subject of vessels I may mention a case which some of you saw this time last year. A soldier on a native gunboat very foolishly got in front of the cannon when firing a salute on New Year's morning, with serious consequences to himself. His forearm was severely damaged, and as several days had elapsed since the injury before he came to the hospital, his arm was in a most septic condition and the hand beginning to become gangrenous. I amputated immediately without waiting for a line of demarkation, as I had to choose between that and leaving the patient to become more septic, as even by putting the arm into an antiseptic bath it would have been impossible to get it entirely clean. The patient's temperature was already septic in character. Before removing the tourniquet I put on forceps on the brachial, but before ligating the vessel after removing the tourniquet I was curious to see if the brachial was blocked high up. To my surprise, on removing the forceps, though the artery gaped, not a drop of blood flowed, and no pulsation could be felt anywhere below the edge of the pectoral muscle. The arteries of the triceps bled freely on the forceps being removed. The amputated stump healed up, but on the patient leaving the hospital no sign of pulsation had returned to the axillary artery.

(7). I have seen one traumatic aneurism of the palmar arch resulting from a stab with a knife. I ligatured the brachial under cocaine when the patient came in, which was a fortnight after the accident. He developed tetanus, the symptoms showing the day he came in, *i.e.*, a fortnight after injury, and as he refused to have his arm amputated he went out and died, so I heard, in great agony three or four days after.

(8). I have had two cases of severe injury to the buttock: one in a man who, working in the iron works in Hanyang, was caught by the claws of one of the large cranes. It caught in the fold of the glutens and tore his thigh down to the bone, severing everything and baring,

but not otherwise damaging, the bone. The sciatic nerve was severed. I put him under *chloroform* and proceeded to clean him up, united the nerve with chronic gut and the muscles with buried sutures and fixed him up, but he never recovered from the shock.

(9). The other case was a boatman, whose boat was upset by the steam ferry, and as he fell into the water the propeller struck him on the buttock. There was only a small superficial wound just large enough to admit my finger, but all the tissues beneath had been ruptured for six or eight inches and the os innominatum fractured. The side and back were black and blue, the echymosis extending down the thigh. I opened the wound up and removed the comminuted pieces of bone and cleansed the entire place, but everything sloughed, the side and back and down the thigh, a process of rapid gangrene following the injury. The patient succumbed some days later.

Excisions.—I have excised several elbow joints for tubercular disease, usually with sinuses. The results in these cases, while good, were not such as one could be proud of as useful limbs. Compared, however, with the former condition the result was good. On the other hand, excision in cases of old dislocation, being aseptic from the beginning, are more hopeful. One such case was operated on a year ago and has proved a great success. To my mind the after treatment is as important as the operation, and it is for that reason that I mention it specially. His arm had been fixed for six months, with the result that the biceps and triceps were atrophied, so that when the operation wound had healed the new joint seemed likely to become a flail-joint, not because too much bone had been taken away but simply because the muscle refused to act. It took three months' massage twice a day for ten minutes to bring the muscles to a good condition, and the boy left the hospital able to lift weights as well as to use his chop-sticks. I heard last week that he is able to take part in the physical drill which Mr. Helps has instituted for the boys at Han-ch'uan, where he lives. One wrist joint which I excised does not make one very hopeful of such cases.

Two upper jaws and two lower jaws.

Keloid.—I have noticed this is much more frequent in scars after operation than at home, especially in tubercular cases. I have had a case recently which had been badly burned with *nitric acid*; after being healed for twelve months he returned the other day with keloid growth in every scar.

Venerial Sores.—I had two cases one summer of typical soft sores in the axillæ. The patients had evidently inoculated themselves by folding their arms. The moist axillæ afforded an easy place for contagion, the parts being covered only with the sleeveless vest during the hot months.

Atresia Ani.—I have operated on four cases, none of them serious, the rectum coming low down and bulging when the child cried. One of the cases proved interesting, as the rectum opened into the posterior part of the vulva in front of the fourchette. I was able to bring the rectum down and fix it in the perineum. As regards the operation the child was doing well, but died from intercurrent disease.

Had she lived I would have had to do another operation on her, as I had not left enough space between the vulva and the new position of the anus. I have not seen a case which needed abdominal section.

I shall close this paper by referring to two cases of glandular tumors on the groin. The first was a man who came with a peculiar ulcerating growth on the heel. It had a look of being epitheliomatous. I removed it completely, leaving a clean wound to granulate up. It was exceedingly slow in doing so, and during this time he developed a glandular growth in Scarpa's triangle. As the growth did not go down under various medicinal treatments we cut down and excised them. On opening them they proved to be what we thought were unmistakeably tubercular glands caseating, a diagnosis which was further borne out by the scar which healed by first intention developing keloid. In this diagnosis we were further confirmed by reports of similar cases given in *Annals of Surgery*. However, some time after operation, the glands commenced to grow again, at least a tumor commenced to form in the same region, and as it rapidly increased in size we again cut down, removing the old keloid cicatrix by an elliptical incision. The new tumor was much deeper in position and was closely and firmly adherent to the neighboring parts, indeed the deep fascia was infiltrated and the tumor had involved the sheaths of the vessels. In removing the growth, which could not be done completely, the vein was cut and a forceps had to be left in. Waiting the microscopical diagnosis we had to diagnose the tumor as malignant. The patient died some days later.

The other case was a young man who came with a tumor in the upper portion of Scarpa's triangle. No specific or venereal history. No history of wound or abrasion on the foot. Tumor from position might be hernia (femoral) or glandular tumor. No symptoms of femoral

hernia, so I cut down to remove the growth. On coming down on it, it showed a smooth surface like mucus membrane, with dark green color showing through, giving the appearance of gangrenous gut, which has not yet lost its shine. I hesitated, fearing it might be a femoral hernia, but going over the steps of my diagnosis again, decided that it could not be that, so I proceeded and removed a small tumor about three and a half inches by one inch, completely encapsulated, which came away without the least difficulty. On section it proved to be a melanotic sarcoma. What the result ultimately will be it is difficult to say. I am hoping to hear something of the patient again, as he lives near one of our out-stations.

LEATHER SPLINT FOR USE IN CASES OF CARIES OF THE SPINE IN THE DORSAL OR LUMBAR REGIONS.

By W. E. PLUMMER, M.D., Wenchow.

I have found that my Chinese patients object to plaster of Paris splints, and often remove them after a few days' use; so have sought for some other form of splint material, obtainable in China, that would be cheap enough to make its general use possible.

Such, I think, is cow's skin leather. (Buffalo skin leather is much thicker and more expensive.) For any who wish to try this material a short account of our method of using is added.

The night before the splint is to be made a piece of leather, about the required size, is placed to soak in Chinese vinegar, and by the following morning is soft and pliable. The splint is made from two pieces of leather; each piece is long enough to extend from the upper level of the shoulder to



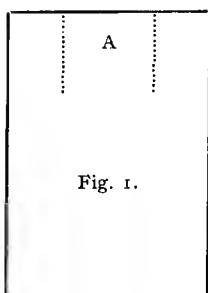


Fig. 1.

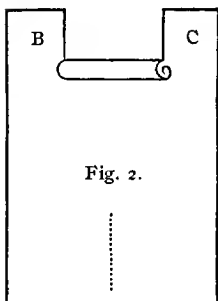


Fig. 2.

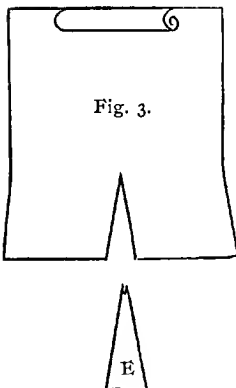


Fig. 3.

the great trochanter of the femur, and the width above is a little less than half the circumference of the chest and below a little less than half the circumference of the waist.

First, two vertical incisions are made down to the level of the armpit: these are sufficiently wide apart to clear the anterior and posterior axillary folds (see fig. No. 1). The piece of leather thus separated (A, fig. 1) is now rolled on itself and tied in position by three pieces of string, thus forming a rounded surface to receive the weight of the axilla (see photo No. 1 and fig. 2).

The pieces of leather (B and C, fig. 2) are removed so as to make the upper border of the splint level with the armpit roll.

The circumference at the hips being greater than at the waist, a vertical incision is made from the centre of the lower border up to a point corresponding to the waist.

If the two pieces of leather are now placed accurately in position on the body it will be found that on each side the lower ends are separated where the incisions were made (see fig. 3).

Into this gap a small piece of leather (E) is sewu with string. (The holes for the string have first to be made with a bradawl.) When holes have been pierced through the anterior and posterior borders the splint is ready to be placed in position and laced up.

In very hot weather the patient may perspire so profusely as to somewhat soften the leather; in that case a strip of perforated zinc, sewu on the outside from each armpit to hip, will prevent the leather crinkling.

After the leather has been laced into position the patient must lie on his back



until the leather is dry. This takes about twelve hours.

This material has the following advantages over plaster of Paris :—

1. The patients do not object to its use.
2. The material is cheaper in Wenchow.
3. The splint can be removed and replaced, so that the patient is able to wash and avoid the irritation which is especially likely to follow the use of plaster of Paris in hot weather.
4. The time occupied in making the splint is not longer than required for putting on plaster of Paris.
5. The leather splint can be made by one man, while plaster of Paris needs two or three men to apply it with comfort, and in addition it is necessary to suspend the patient.

Photo No. 2 shows the same material used to make a splint for the hip joint.

LUFF'S CHEMISTRY. 化學詳要

Reviewed by Dr. GEORGE A. STUART.

The publishing of Dr. Cousland's translation of Halliburton's Physiology was the first definite step taken towards giving Chinese medical students modernized text-books with the uniform terminology prepared by the committees of the Educational and Medical Associations. Dr. Whitney's retranslation of Gray's Anatomy, now nearly through the press, will be a further addition to this class of works.

The volume before us, which has been so admirably translated by Dr. Gillison, supplies a much felt want. The original text-book is well adapted to the needs of medical students of the present time in China ; and even if subsequently more pretentious courses in chemistry are taken by students who have completed this work, what is here learned will serve as a very satisfactory basis for the advanced work. There

are many good text-books in chemistry of this type, but none better than the one chosen to meet the needs of Chinese students at the present time.

The translation has been very accurately done, the style being a clear, not-too-difficult *Wên-li*. Very few abstruse characters are to be found; and this is particularly fortunate in this case, as the new nomenclature contains many unusual characters, not to speak of new forms and combinations. The terminology is rendered very much clearer, to the English reader at least, by the practice of putting the English term in parenthesis in the midst of the text or at the top of the page. This will also be of much use to the student, as most of those who will use this book will have some knowledge of the English language.

The only thing which mars the work, in the opinion of the reviewer, is the fact that the translator did not adhere in every instance to the terms proposed by the Terminology Committees. Most notable among these are the terms for *arsenic*, *manganese* and *sodium*. Whether *arsenic* should be classified among the metals or among the earths is an undecided question, and Dr. Gillison probably followed his author in placing it among the metals. To this no objection can be taken. But in the case of *manganese* and *sodium* it is quite different. Rule II, adopted by the Terminology Committees, reads: "Let the names of all the more important elements be significant and the less important ones phonetic." There might be some difference of opinion as to whether the term for *manganese* should be significant or phonetic. But in any case 錳 was considered by the committees to be an impossible term, and they attempted to make it significant by using 錳. By adding a little to the character 錳 it might be both significant and phonetic. In the case of *sodium* there would seem to be no doubt. So widely diffused an element should certainly have a significant term, which 鈉 is not, its meaning being "to sharpen" (see Giles and Kanghsi). 鹼, as representing one of the greatest natural sources of *sodium*, is certainly open to no serious objection. That it is somewhat similar in sound to the term for *chlorine* would find no difficulty in practice, except possibly among foreigners. So seriously does the reviewer regard this matter that he would rather see the edition of the book marred by corrections of this term with a rubber stamp than that 鈉 should gain any greater currency as a term for *sodium*.

The typographer's and book-binder's work upon the book is of a high order. It comes in two styles of binding. One in cloth boards in a single volume, and the other in two volumes neatly and strongly bound in Manila paper.

Medical and Surgical Progress.

Pathology and Bacteriology Notes.

Under the charge of JAMES L. MAXWELL, M.D.

In former notes we have called attention to the growing importance of the group of germs known as "spirochætæ" in the causation of disease, and recent medical papers still further confirm this.

From the *British Medical Journal*, October 28th, 1905, we quote the following notes:—

During the last few months, Dr. Schaudinn tells us, his recent discovery of the presence in syphilitic lesions of a characteristic spirochæte has been confirmed by more than one hundred independent authorities; and Dr. Schaudinn appears to be thoroughly justified in his conclusions that in primary and secondary lesions the spirochæte pallida is invariably present, and that failures to demonstrate it are merely due to inexperience and faulty technique. In the last seventy cases which Dr. Schaudinn has examined, including cases of congenital syphilis and also experimental syphilis produced on the ape, he has not met with a single negative result. With tertiary syphilis, however, he has not been successful, and he is inclined to the opinion that in these late syphilitic manifestations the spirochæte has become modified into an atypical, resting form.

One practical result of this widespread stimulus to the search for the spirochæte pallida is that the presence of various spirochætæ in a large number of pathological products has been shown to be much more frequent than was hitherto supposed. Hence the difficulty is increased of distinguishing the true spirochæte pallida from other spiro-

chætæ which are likely to be met with. When the material is examined in the fresh condition the delicacy and translucency of the spirochæte pallida, together with the characteristic shape of its spirals, which consist of short, sharp, uniform turns, generally from ten to twenty-six in number, ought to be sufficiently diagnostic to prevent confusion with any other objects. It is important, moreover, to note that the organism exhibits this typical form, not merely when in motion but also when at rest, whereas all other spirochæte which are likely to be confused with it only exhibit spiral coils of this type when in particularly active movement.

Further investigations have now led Dr. Schaudinn to the discovery of a highly interesting difference between spirochæte pallida and other spirochætæ. Whereas the many other spirochætæ he has examined possess an undulatory membrane, but no flagellæ; the spirochæte pallida shows no recognizable undulatory membrane, but possesses at either extremity a long, slender flagellum equal in length to from four to six coils of the spiral body of the organism.

OBSERVATIONS ON PARANGI (YAWS).

British Medical Journal, November 18th, 1905. By A. Castellani, M.D.

This is a more detailed account of some observation reported earlier by the same writer on the presence of spirochæte in yaws.

After entering into the history of his discovery and the technique of the preparations the writer gives the following description of the spirochætæ found :—

In the preparations from ulcerated lesions various spirochætæ are present. One form is rather thick and takes up the stain easily; it is morphologically identical with the *S. Refrigens*.

One form is thin, delicate, with waves varying in size and number and with blunt extremities—*Stenius obtusa*. A third thin and delicate, but tapering at both ends. *Stenius acuminata*.

In non-ulcerated lesions there may be found a spirochæte which I believe to be identical with spirochæte pallida.

Frequently the patients presenting spirochætæ do not show them constantly, but only at long intervals. Weeks may pass before a single spirochæte is found; no spirochæte are found in lesions which are healing.

DIARRHŒA FROM FLAGELLATES.

By Aldo Castellani, M.D. *British Medical Journal*, November 11th, 1905.

The patient was a Maltese merchant resident in Ceylon for several years, who was suffering from diarrhœa. He had been passing for the previous three days six to eight motions in the twenty-four hours; no abdominal pain, no tenesmus. Stools semi-liquid and brownish, without any blood or pus. The organisms were swarming; in each field of the microscope I could count forty or fifty at least.

The flagellates present could be divided into three groups :—

1. Large pear-shaped bodies possessing an undulating membrane along the body, two or three flagella at one pole and a short thick one at the other pole. An indistinct nucleus was present and several non-pulsating vacuoles could be seen. These parasites are trichomonata—trichoma hominis.
2. Small roundish bodies without any undulating membrane. These bodies had one flagellum only. The protoplasm was homogeneous. No vacuole was present. These parasites are, in my opinion, cercomonata.
3. Roundish non-motile bodies with sometimes a few vacuoles. These bodies may perhaps be considered as encysted forms.

In a second case similar in symptoms to the above two more forms of protozoa were observed :—

1. Several actively motile organisms with eight flagella, two of them taking origin at the inferior pole of the body and others from various parts of the body. In fresh preparations these flagellates showed in the posterior portion of the body two very refractile roundish points situated close together. This parasite is *Lambliã intestinalis*.
2. A few individuals of another form of protozoa, possibly a developmental stage of the trichonoma. The organism presents a continuous rapid undulating movement from one to the other extremity of the body, this being due to the presence of an undulating membrane.

Now and then at intervals of fifteen or twenty seconds a very narrow, long, straight pseudopodium is shot from the body. The pseudopodium is emitted very quickly and as quickly retracted. Only one is emitted at a time.

The protoplasm is finely granular, and one small vacuole is often present.

Surgical Progress.

Under the charge of J. PRESTON MAXWELL, M.B., B.S., F.R.C.S.

THE SURGICAL TREATMENT OF NON-CANCEROUS AFFECTIONS OF THE STOMACH.

Abdominal surgery has progressed so much of late years that it is very difficult to give in sufficiently small compass a *résumé* of the subject. In the *British Medical Journal*, September 30th, 1905, there is both the report of the discussion on this subject at the annual meeting of the British Medical Association and a paper by Robson delivered at the International Congress of Surgery held in Brussels during 1905.

Generally speaking the operation which has gained for itself an established place in the treatment of these affections is that of gastro-enterostomy by either the anterior or posterior route; the latter being apparently preferred by those who have most experience in these operations.

In the treatment of *simple ulcer*, which has failed to yield to medical means or in face of severe hæmoptysis, this operation seems of itself to be a curative measure in the majority of cases. Provided the operation is performed, so that the opening into the jejunum is as near the jejuno-duodenal junction as possible, there is little fear of setting up the much dreaded pernicious circle, and it does not appear if this is carefully done that there is need to make an intestinal anastomosis in addition. But it is well in performing the posterior operation to place a stitch on either side to anchor the jejunum to the opening in the transverse mesocolon and prevent the possibility of an internal hernia.

With regard to the treatment of *perforation of the stomach* there

is little to note of change in treatment. Operation should be undertaken at the earliest possible moment if the stomach contents have been widely distributed, lavage with saline solution and suprapubic drainage should be employed, but if localized sponging is sufficient. Excision of the perforated ulcer has rather fallen into disuse, and the edges should be infolded if possible, and if near the pylorus the operation may be well finished by the performance of gastro-enterostomy. An omental graft is often of great use, and the stomach should be well washed out by means of a stomach tube.

In *obstructive dilatation and primary dilatation* which fails to yield to medical treatment several operations have quite dropped out of use. These are pyroplasty, gastroplication, Loreta's operation, gastrolisis. Finney's operation is still on its trial. Gastro-enterostomy on the other hand has firmly established itself. The opening should be posterior and as near the pylorus as possible.

In *stenosis of the cardiac orifice* of the stomach this organ should be opened and the stricture dilated from below, after which bougies should be used from above. While this procedure is going on a gastrostomy enables the patient to obtain proper nourishment and can be used should the opening contract up again, as if properly managed it gives the patient but little if any inconvenience.

In persistent *gastralgia*, in which the patient has been much reduced and medical treatment has failed, gastro-enterostomy has given extremely good results.

Space forbids dealing with the rarer cases of non-malignant tu-

mors of the stomach, congenital hypertrophic stenosis and Reichmann's disease.

In wounds of the stomach, by either stab or bullet, it is important to operate early; bear in mind the possibility of multiple wounds and examine the posterior wall of the stomach for injuries short of perforation, but which, if left untreated, may rapidly result in this accident.

THE PROBLEM OF CANCER.

Various scientific reports of the Imperial Cancer Research Fund (London, England) have lately been issued, and the matter being one which intimately concerns Surgical Progress it is well that its findings so far should be borne in mind.

Placed in tabulated form these are as follows:—

- (1). There is nothing in the statistical investigations of this Research Fund which points to an actual increase in the death rate from cancer.
- (2). Cancer is an identical process in all vertebrate animals.
- (3). It develops at a time which conforms in a striking manner to the limits imposed by the short or long compass of life in different animals.
- (4). That cancerous tissue can be artificially propagated in the short lived mouse by actual transference to another individual, but only to one of the same species.
- (5). "The processes by which growing cancer cells are transferred to a new individual are easily distinguishable and fundamentally different from all the known processes of infection."
- (6). "Probably, when the full facts are known, the recorded incidence of cancer at all ages will approximate in cattle and in mice to that at all ages in the human subject."
- (7). In 1903 the death rate for man at all ages from cancer was lower than the incidence of cancer in cows found at the Glasgow abattoirs.
- (8). "Within the short time during which the enquiries have been made in the regions where intercourse with civilized man is at a minimum, specimens of undoubted malignant new growths have been obtained."

(9). Undoubted malignant growths have been found in fish, sixteen cases being recorded.

(10). The idea that sarcoma is more common amongst the young is rather dispelled and it is added:—

"This result (viz., that the death rate at each age group is found steadily to increase with advancing years in the manner long known to be characteristic of carcinoma) has an important bearing on the investigation of the nature of cancer; for it suggests that sarcomata and carcinomata are manifestations in different tissues of an essentially similar process."

The quotations are taken from the report direct, and some of the points from a critique on the same in the *B. M. J.*, September 9th, 1905.

ON THE REMOVAL OF THE UTERUS IN UTERINE CANCER.

At the British Medical Association meeting of 1905 Professor Dr. Wertheim described in detail his operation for the removal of the uterus and surrounding cellular tissue in cases of this serious affection. And whereas the abdominal route for the removal of uterine cancer has proved a most fatal one in the past, in his hands the mortality has been reduced to a very reasonable figure, whilst his statistics of recurrence after operation are extremely good, in spite of the fact that he operates on sixty-five per cent. of the cases which come under his notice.

The method, which is fully described with illustrations in the September 23rd issue of the *British Medical Journal*, consists of the systematic exposure of the ureters and the subsequent removal of the uterus, upper part of the vagina, broad ligaments and any enlarged or palpable glands close to the iliac vessels. Trendelenburg's position is best for the operation, and the preliminary cleansing of the vagina should be done before the anæsthetic

is administered, so as to lessen the duration under the *chloroform*. A similar operation has, in several other operators' hands, been equally successful, at any rate as regards the immediate results, and it is quite a possibility that the abdominal route will in due time completely displace the old vaginal operation.

ON WOUND OF THE THORACIC DUCT.

This accident, whilst fortunately uncommon have, nevertheless, accounted for more than one death after operation in the root of the neck on the left side. Bucknall (*British Medical Journal*, September 30th, 1905) reports two cases in which the accident happened. In the first case tubercular glands were

being extirpated, in the second cancerous glands were being dealt with in like manner.

The loss of weight and strength consequent on the loss of chyle were remarkable in the first case. The wound was reopened and the cut duct found and ligatured. Rapid restitution of strength and weight ensued, and beyond some œdema of both sides of the face, head and neck, which passed slowly away, no ill effects were noticeable.

In the other case the duct was ligatured at the time of operation. These cases prove that it is unnecessary to consider the question of trying to reunite the ends of the cut duct, and simple ligature is probably the best method of treating the accident.

SPRUE AND ITS TREATMENT.—Dr. W. Hartigan in *Journal of Tropical Medicine*, March 1, 1905, says sprue is a complaint so baffling, so difficult to cure, recurring so frequently after apparent recovery that any hint as to its treatment is worth recording. The disease shows itself in various forms, and many seemingly favourable cases prove most intractable, while others make rapid and complete recoveries. In the majority of cases which quickly respond to treatment the disease is confined to about the lower eighteen inches of the bowel, while in the intractable cases the upper portion of the colon and probably the lower part of the ileum are involved. Hence, in the former, the almost certain efficacy of copious antiseptic lavage, while in the latter they have little or no effect on the actual course of the disease. Little is known of the etiology of sprue. Its fatality is due to inability to assimilate food. The usual symptoms are wasting, sore tongue and frequent and abundant frothy stools. The patients are unable to take the mildest or simplest nourishment on account of the pain caused to the mouth and tongue and the almost immediate evacuation thereby brought on. The value of antiseptics applied locally to the bowel has been proved. *Boric acid*, however, produces headaches and increases digestive troubles. *Carbolic acid* is ill-born; *salol* makes the stools more healthy, but does not cure the disease; *perchloride of mercury* and *naphthol* are inefficient. *Cyllin*, a new disinfectant of the *cresol* series, given in the form of intestinal platinoids, 3 minims, cyllin in each, is well borne, the number of stools rapidly diminishes, the bowels are regulated, and the general

condition of the patient improved. The platinoids may be given every second hour if necessary, but rarely more than eight a day are required. They are best given an hour after food. All pain and tenderness over the lower part of the abdomen disappear; there is a steady increase in weight, and the patient is soon able to return to the ordinary diet. The cases treated solely by rest and milk diet take a much longer time to get well, and their recovery is often not complete. Relapses, particularly on returning to a hot climate, are frequent.—*The Monthly Cyclopædia.*

Book Review.

MANUAL OF NURSING 護病要術.

This is a timely little handbook that has been prepared by the members of the Central China Branch of the Medical Missionary Association. The book contains seventy-four leaves of text, divided under the following heads. First, there is an Introduction which calls attention to the fact that the office of nursing is the development of Christian civilization, and treats of the qualifications of a nurse morally, and the special qualities desired in one who gives himself to this work. Then follow chapters upon Elementary Anatomy and Physiology, Surgical Nursing, General Nursing, Nursing in Medical Cases, Obstetric Nursing, and Nursing in Children's Diseases. At the close is a glossary of terms in English and Chinese.

The Chinese style aims to be an easy Wên-li, but is rather deficient in this respect. However this is no serious objection, as the subject matter is most excellent, and the class of students who will ordinarily use this book will not care much about the literary style. The terminology aims to be non-technical. It might well have more closely followed the new lists, however, as medical students can also use this book with much profit, and many of the proposed lists are as clear to the ordinary reader as the terms chosen in this book. For instance 烈 is used for "acute" instead of 急 as in the Association lists.

We anticipate that this little manual will quickly find a place in every hospital in China.

G. A. S.

The China Medical Missionary Journal.

VOL. XX.

MARCH, 1906.

No. 2.

Editorial.

"OPIUM IN THE ORIENT."

Every one of us has read the report of the Philippine Commission and, we doubt not, most of us are delighted therewith. It warms the heart and gives one hope that not only in the Philippines there may be freedom from the opium curse, but that even in China, in the not very far future, something practical may be done. It seems possible and very strange that after all England may never grasp the opportunity of undoing her long standing wrong, but that China herself, in the not very distant future should, with the independence born of Japan's late success, shut opium out along some such lines as those Japan is pursuing in Formosa.

That the report of the Commission is actually to be the basis of future methods in the Philippines is quite the expected thing. Twenty years ago such a practical and radical procedure would have been laughed at by the American people and eternally buried in the archives of Congress. But times have changed.

THE ROLLS.

During the China New Year holidays the Secretary has been engaged, among other things, in the periodic task of revising the membership list of the Medical Missionary Association; and the list, as revised, is sent out with the March number of the JOURNAL, in the earnest hope that the members and others who may see it will promptly notify the Secretary of any mistakes.

The effect on the Secretary has been both inspiring and depressing; inspiring in that he has discovered how large the number of medical missionaries in China actually is; depressing in that it shows that one-sixth of the total are not affiliated with the Association, though it would be unjust to say that they are not in sympathy with its work and aims. Why is it that so large a number have taken no part in the work of the Association and so neglected the

means God has given us for mutual council and help? The Secretary can only think that the chief reason is indifference both on the part of the new-comers and also on the part of the older members of the Association residing in their vicinity.

Here are a few statistics of the non-members of the Association in their geographical distribution: Chihli 9, Kwangtung 7, Szechuen and Yunan 7, Fukien 6, Manchuria 5, Hunan and Hupeh 3, Kiangsu 3, Amoy district 3, Chekiang and Shantung each 2, other regions 6. The other source of depression to the double-dutied official in question is the small proportion of members who take any active interest in the JOURNAL. (Excuse us if we have mentioned it before.) Without wishing to acquire the reputation of a shrew in the Association we must say, in all seriousness, that the support given to the JOURNAL (we do not mean financial support) by the members of the Association is nothing less than disgraceful. Out of some 250 members there are less than twenty-five who really act on the belief that the JOURNAL has a claim on their interest and support. Perhaps fifty more help us by sending their annual hospital reports, for which we are grateful, and the rest where are they? It was pointed out at the Conference last year that if one-half the members of the Association would write twice a year for the JOURNAL we should have no lack of material, while as a matter of fact we are even as the beggars before your doors, who hardly know from where their next meal is to come.

Oh that something that we could say or do would kindle in the hearts of the members that loyalty which they should feel for their official offspring who, through long years of inanition, is not yet able to walk alone.

THE RIOT AT CHANG-PU.

The news received this last month of another outbreak in the south, this time at Chang-pu, in Southern Fukien, in which a mob, reported to be revolutionary, destroyed the residences, church buildings and hospital of the English Presbyterian Mission, is a sad beginning for the New Year in China. Fortunately in this case there was no loss of life. So far as reported there was no provocation beyond the usual anti-foreign and anti-Christian animus which seems to be underneath most of these ebullitions of stupidity

and short-sighted policy on the part of the lords of misrule in this fair land.

One cannot help wondering how long these things are going on and if they cannot be prevented. The causes are various, but we believe they may be narrowed down to four: race prejudice, superstition, misgovernment and, in rarer instances, actual aggression or lack of tact on the part of the foreigners.

So far as missionaries are concerned these forms of opposition, while they are to be deplored, and avoided when possible, cannot be unexpected. In all the history of the Christian church, from the first century to the twentieth, there has not been a time in the progress of the Kingdom in a heathen nation when these persecutions did not come. Our Lord Himself told His disciples to expect as much. Human nature, unregenerated by the Spirit of Christ, is the same the world over. If even in His followers it breaks bounds at times, what else can be expected of the heathen who know Him not? "The light shined in the darkness and the darkness comprehended it not," for "men loved darkness rather than light, because their deeds were evil."

NOT MERELY AN "AMERICAN FRAUD."

Among the numerous periodicals that engage our editorial attention and that make walking through the sanctum difficult, that which we read for the pure joy of living, is *Collier's*. The *Bulletin* of Johns Hopkins Hospital and the *Missionary Recorder* are good exercise, but *Collier's* is a rush over the ice on skates, a tear across country behind a good pack, a climb to the top of Fugi. It does not come to us as an exchange. We pay for it out of our pocket, and that means something with silver at 1.92 and prices at 2.50. We do not even aspire to understand the "Sick-a-bed Lady" beyond the fact that both to the old and the young doctor, medical ethics and propriety seem to have been quite as misty as the rest of the story is to us. But before *Collier's* stand on the proprietary medicine question we are sitting in the front row and listening with two ear trumpets, just to show our interest. Of course this matter has been in the hearts of the profession for many a year, and we have longed for the power to do something about it.

But the more we said the more we were misunderstood, and so we have continued to protest mildly and hopelessly. Now the most popular weekly in America has spoken the truth and right from its heart, and if the people do not listen, . . . well there is no use of saying "what," because they will. The American people do listen when the right man speaks.

How we wish there were a Chinese edition of *Collier's*! It is a strong expression, but we mean it when we say that OPIUM WILL NOT PROVE A GREATER CURSE TO CHINA THAN WILL THE PATENT AND ADULTERATED MEDICINE CURSE IF IT IS ALLOWED TO TAKE ITS PRESENT COURSE TO ITS NATURAL TERMINATION. One must live in Shanghai to get at this proposition. One must know the sick Chinese pretty thoroughly to grasp its import. We do both!

The Chinese are the greatest medicine eaters on earth. There is no limit to the amount of medicine they will consume. At present their own medicines are worthless, but at least comparatively harmless. All the conditions are ready, and so are the patent medicine fiends. Shanghai is fairly papered with promises to cure every known ill. Huge dispensaries are springing up to pour their vile stuff upon a people that knows nothing of its use or of its danger. Every patent medicine that one has ever heard of, and many more, are here and doing well, and the Chinese are buying in large quantities, prescribed by Chinese druggists who know nothing of what they are doing except that there is money in it. And probably the worst part of it all is that most of it is not what it pretends to be but some Japanese or other imitation. I do not suppose that the cod-liver oil preparations that the Chinese buy ever saw the shadow of a cod-fish. I know that the whiskey that is made here, and sold as Hongkew whiskey, is made of wood-alcohol, weak tea and sugar. It makes for five cents and sells up to a dollar a bottle. And the Chinese in Shanghai, especially the younger men, are surely and not by any means slowly learning to get drunk on foreign liquor. To say that the Chinese temperament is contrary to the liquor habit is absurd. Wait and see that we are right. It is proved already in Shanghai. Make it cheap enough and it will go. I heard the other day of a Chinese feast, at which every man present drank a quart bottle of California port wine.

Morphine is sold, as we all know, widely as a "sure cure" for the opium habit. It cures too every time. And the virtuous Japanese who guards his sacred country from the opium cures, sells to any and every Chinese coolie that asks for it a cheap hypodermic syringe with which to work out his own eternal damnation if he can. Can he? Well that depends. There may not be room enough when all the patent medicine people get in.

It may not yet be too late. Are we going to do anything about this matter?

THE TREASURER'S REPORT.

The annual statement of the accounts of the MEDICAL JOURNAL, and also the Publication Committee are herewith presented with the kind assistance of Mr. Williamson, the accountant at the Mission Press. The only part of the account that has actually passed through the Treasurer's hands are the subscriptions to the Publication Fund, with a few exceptions, which have been sent directly to the Press, and an occasional JOURNAL subscription.

From the time that the JOURNAL goes to press it is obviously impossible to publish the annual statement to the 31st of December in the January issue; so the Treasurer offers no apologies for presenting it in March and would respectfully suggest that By-law 4 be amended at the next general meeting.

FINANCIAL STATEMENT FOR 1905.

Dr. China Medical Missionary Journal in account with the Treasurer. Cr.

<p>To 4/5 balance transferred to Publication Committee Fund ... \$400.00</p> <p>" Printing JOURNAL ... 583.00</p> <p>" Hire Union Church Lecture Hall ... 10.00</p> <p>" Magazine Wrappers ... 8.75</p> <p>" Printing Constitution, Circulars, Programs, Blanks, etc. 20.72</p> <p>" Photo Block and Collotypes, etc. 64.22</p> <p>" Fifty extra copies May JOURNAL 7.00</p> <p>" Stationery ... 2.40</p> <p>" Advertising in <i>Recorder</i> ... 2.00</p> <p>" One Nomenclature returned... .40</p> <p>" Stamps and Postage ... 82.71</p> <p><u>\$1,181.20</u></p>	<p>By Balance brought forward from 1904 ... \$506.36</p> <p>" Sales during the year (nett)... 513.44</p> <p>" Subscriptions collected " ... 269.44</p> <p>" Advertisements " " ... 114.69</p> <p><u>1,403.93</u></p> <p><u>\$1,181.20</u></p> <p>By Balance brought forward \$222.73</p>
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PUBLICATION FUND.

Contributed for the purpose of publishing medical text-books and other literature in the Chinese language useful to the advancement of medical education; to be used under the control of the Publication Committee of the Medical Missionary Association of China.

Previously reported	\$1,776 13	Miss J. N. Anderson....	£ 5 0 0
Dr. J. Howard Montgomery, Chang-pu	15.00	Mrs. Landale	1 0 0
" M. D. Rubank, Huchow	5.00	Mr. A. S. Cousland	10 0 0
" I. Sjöquist, Siang-ying	5.00	From Dumfriesshire....	2 0 0
Prof R. R. Simpson	£ 5 0 0	Edinburgh Medical Miss. So.	25 0 0
Dr. J. W. Ballantyne	5 0 0	Anonymous	12 0 0
" Keppie Paterson	1 1 0		
" R. J. Pye Smith	1 0 0	Through Dr. P. S. Cousland	£109 3 0=
" Courtney Kenny	15 0 0		\$1,031.35
" A. H. F. Barbour....	25 0 0		
" James Ritchie	2 2 0		\$2,322 48

PUBLICATION COMMITTEE FUND, 1905.

Dr.

Cr.

To Printing Physiologies ...	\$248.28	By ¼ Balance from JOURNAL ...	\$400.00
" " Nomenclatures ...	301.00	" Subscriptions ...	1,376.13
" " Circulars, etc. ...	18.55	" Sales of Publications (nett)	491.05
" Blocks and Illustrations ...	255.33		
" Binding ...	28.50		2,267.19
" Dr. Cousland to balance act.	20.00		
" Mailing and Postage ...	14.59		
" Advertising ...	11.50		
" Books returned ...	8.50		
" Invoices ..	72		
	<u>\$906.97</u>		<u>\$906.97</u>
		By Balance... ..	\$1,360.22

THE C. C. M. M. A.

We have to thank the Secretary of the Central China Branch of our Association for a neat little program of its meetings for 1906, which will be found under Correspondence. We sincerely hope that not only the papers but also the discussion of them, so far as is possible, may be sent to the JOURNAL, that those of us who are beyond the immediate influence of such an organization may yet be able to gain some of the help and inspiration which we so sadly need, and which is best obtained in the pursuit of common interests and high ideals in the spirit of brotherly courtesy and friendly rivalry.

Hospital Reports.

While we cannot record for the twelve months just closed more startling deeds, *American Baptist Mission, Swatow.* more faithful effort than have characterized preceding years in the medical work of this station, yet to a new-comer the second year cannot but hold more of encouragement than the first when he found himself hampered at every turn because of his inability to speak or to profit when spoken to, having had but three months' language study to begin with. Although that discouraging feature is by no means removed, though lessened in some degree, we feel that the year has been one of progress. A better grade of medical and evangelistic work has been done than last year. The men's department, in both old and new buildings, was well filled during the busy fall season, and there was a goodly attendance of women also. With the rice harvest came the usual decrease in numbers, but we have been pretty busy up to the end of the year. In November dispensary work was begun at Chao-yang, a city of over 200,000 souls, situated ten miles inland and connected with us by steam launch. Thus far one day a week is spent there with an average attendance of seventy-five patients. We hope it may be a help to the evangelistic work carried on in that city and in the large area for which that is the chief trading point; and that it may be instrumental also in leading many to the hospital as in-patients, where the opportunities for influencing them are so much greater than during the short dispensary hours.

In connection with the evangelistic work at the hospital we have been

especially pleased with the spirit with which the theological students have taken hold of the chapel services each morning and evening. They lead in turns; two having charge for a week and then giving place to two others until the list of leaders is exhausted. Special evangelistic work for the women has been conducted by Mrs. Waters and later by Mrs. Worley; a service being held each afternoon for the in-patients.

Some of the individual cases have been quite interesting. One patient came with necrosis of the thigh bone in two places, the result of wounds received in a clan fight. Upon operation a flattened bullet was found in the upper third of the thigh. The assistants then remembered that the man had been at the hospital some time previous to my coming, when a bullet was removed from the lower third, from which point, however, there was still some discharge. During the entire history of the case there were three anæsthetic operations and one or two minor ones; and though he vomited badly after each anæsthetic he was always eager for an operation until he finally went home cured. He became a Christian after his first visit to the hospital, and often while there could be heard reading his Bible and singing hymns, and since his return home reports have come of his active Christian work in his own neighborhood.

A man over sixty years of age, for many years an active Christian, came to us this year for an amputation of the thigh. For forty years his only mode of locomotion had been by means of his one sound limb and a bamboo staff. The

knee joint of his diseased member was ankylosed with the leg flexed at a right angle. Dr. Scott, my predecessor, had urged him before to have an amputation performed, for the limb frequently gave him trouble, but it is said that he did not fancy the idea of a one-legged man *preaching the Gospel*. But the more severe pain of late and the constant discharge had made him not only willing but urgent. It was necessary to amputate in the upper third, but he recovered well and went home in a few weeks in a satisfactory condition. Before he had been removed from the operating table his son asked me if he should get a box and bury the dismembered portion upon the hill side. The father quickly replied, "Oh, never mind about that; in the resurrection Christ will give me a new body."

Another case, not so encouraging, but illustrating a very common attitude toward one of China's great evils, we cite from among the women patients. A young woman came a few weeks ago with a badly ulcerated foot, due to foot-binding. One toe was entirely gone and another nearly so. Remedies were applied and the ulcer rapidly healed, but when we approached the question of unbinding the other foot all persuasions were futile. Even the evident possibility of the return of the disease if the foot were rebound—as she doubtless intended it should be when she returned home—and the knowledge that her sister had *died* from the same trouble, were both of them unavailing arguments. Her husband too preferred that she remove the bandages while at the hospital, but no one else in her village had unbound feet, so hers must be bound too, though she *might* pay for it with her life.

How we should like to report every patient healed a regenerate

soul, but we have been told to sow the seed, and we know that the *Lord of the harvest* will most surely give the increase.

R. E. WORLEY.

As one who in a state of abject poverty suddenly finds himself rich, so comes the *Medical Work, Shantung*, medical work of Shantung to report in 1905. From miserable mud-floored huts as wards, a dispensary so small the doctor had to get in the corner and open the door back against herself for a patient to pass out, no colleague to help in surgical operations and difficult obstetrical cases, no physician of the General Board to take charge of men and school boys, no native assistant worthy the name, to clean new wards with brick floors, well lighted, well heated and roomy dispensary, a colleague up in all the newest and best in the medical profession at home, a brother physician of the General Board, and an assistant, young, strong and capable,—all this is a transition so great as to call for devout thanks.

The Priscilla Bennett Hospital, almost a counterpart of the Isabella Fisher Hospital of Tientsin, is not finished, but is growing fast, and will be ready for occupancy by fall. The Chinese buildings to be used as wards are nearly completed.

1905.

PRISCILLA BENNETT
HOSPITAL.

To those who see only the external it is a poor substitute for a fine marble monument in a beautiful green cemetery at home, but to the eyes which see "beyond" it is scintillating with diamond luster, as it faces the great *T'ai* temple just over the city wall, and

lifts the banner of Christ at the very foot of the sacred mountain, inviting the endless procession of weary pilgrims to come in, be healed and find the rest for their souls which neither the idolatry of the great yellow roofed temple nor the pilgrimage up the mountain can bestow.

Our hospital is situated on the road to the sacred mountain, "The Road to the Clouds" being the name of the street, and many pilgrims have stopped by our gate to listen to Wang Lao T'ai T'ai, or have gone in to drink tea with her and listen to her messages of love. Many of them have also come to us for treatment. Two priests from the Great Temple have been among our patients, and one priest from the Temple of Punishments. One of our out-calls was to see a nun from the nunnery clear over the crest of T'ai-shan. She was very friendly and invited us to the mountain top to spend several days with her. One grateful man with synovitis of the left knee brought us two strings of cash, a little over fifty cents gold, and thanking us profusely said he was a believer in the true God, and prayed to Him twice every day. He finished his burst of grateful and pious eloquence with, "I don't know what I *should* do without the Lord!"

Many hopeless cases have come to us this spring, and among them quite a number of lepers. Poor creatures! Many *li* (one-third mile) away they hear of the foreign doctor and the wonderful cures, and come long distances only to be informed that they are past help. It is hard lines for them, and hard also for the doctor, for they think she can cure them if she will; and when with an aching heart because of their misery and her helplessness, she has told them many times their case is hopeless, they prostrate

themselves and beg for her compassion. Of lepers, those with destroyed eyes, anxious friends with the iusane, and living corpses in the form of opium victims,—the last are the worst, the opium sots. Dead to all intents and purposes and yet alive, pleading with their ghastly eyes and faces so piteously for the help which is beyond the power of mortal to give. One such case was among our out-calls. The ancestral tablets on the window ledge of the dingy little room, the pile of books on the table, the cultured voice with which the patient spoke the dialect of the scholar, and the opium pipe and lamp near his couch, all told the tale before he did. An official and scholar from a distant province while here officially had been caught by the last stages of opium dissolution, and so in that dingy room with his daughter he waited the coming of Death. A living skeleton, with gray wrinkled skin drawn over the bones, abdomen enormously distended with dropsy, hands and feet offensive with dry gangrene, he was a horror to himself and everyone else, and yet not dead.

A great drawback to our Shantung medical work is the seeing of the sick and giving foreign medicine by those who are not doctors, both native and foreign. It is hard enough to win the Oriental, who is suspicious and filled with fear of devils and undreamed of superstitions, associating all sickness and its cure with spirits and magic, without having to receive the patients after they have passed through the hands of others whom they—the patients—have no way of knowing to be ignorant of the science of medicine.

A lady missionary, in one of the cities of our country circuit, told me she thought she deserved credit for steadfastly refusing to treat the Chinese with foreign medicine. It

had been hard to do, as most of her associates did give medicines. Her reward for doing the right thing, she said, had been to be regarded by the natives as not so well educated as the rest.

One old man of our native church has his sign out as a foreign medicine doctor, and is regarded by the neighbours as belonging to *the medical staff of our mission*. A native pastor's wife who was under my care was given a mixture of opium, brandy and anise-seed by her husband. Whereupon I unearthed the interesting fact that he had a book translated by the English-speaking medical student of a missionary doctor, and a foreigner who was not a physician, which book gives a list of diseases, their symptoms and remedy, and *directions for making the remedy*.

A would-be suicide was carried into the hospital court one evening six hours after she had taken opium. After we had worked over her some time, I reproached them for not coming sooner. They replied that they had gone at once to a neighboring mission, and the foreign pastor had given them medicine, but it had not been effective.

This kind of work cheapens the medical profession and weakens the medical work which can be such a power in mission work in China. It also interferes seriously with medical self-support. Why should a patient come at a set time, which may be inconvenient for him, and pay two and one-half cents which is precious to him, for the services of the doctor, when her neighbor will see him at any time and charge him nothing?

Early in this fall Wang Lao T'ai T'ai, Mrs. Kao, our pupil and assistant and myself made the rounds of the Shantung district. It was a refreshing sight as we stopped to rest to see Mrs. Kao on

one side of the Mission wheelbarrow, and Wang Lao T'ai T'ai on the other, both preaching earnestly to the crowd which surrounded them on all sides. As I sat on my horse at a little distance and tried to realize the full significance of that itinerating Gospel wheelbarrow with its two earnest preachers and listening multitude, a picture of a traveler sitting down by a well to rest, and asking for a drink of water, with the final scene, "The whole city came out to Him," passed before my eyes, and I was content to sit in the sun and dust, weary from hours in the saddle and wait for that wheelbarrow. Everywhere the barrow-men stopped to rest or eat, the scene was repeated. Everywhere we held clinics; crowds beside the sick came to sit at the feet of Wang Lao T'ai T'ai, and when at last we entered our own court again and I said to her, "Now you must have a good rest after these three weeks of toil," she laughed her gurgling laugh, which does one's soul good to hear, and replied, "Tired? I'm not weary. How could I become fatigued in doing the Lord's work."

The evangelistic results of medical work cannot be tabulated and the doctor's soul is often filled with sickening disgust as she thinks bitterly, "What is the use of my wearing myself out trying to resuscitate women who have taken poison to escape a life which is not worth living, while a howling mob of her relatives surround me, waiting for the gasp as the signal for pulling the house down about the ears of those who have caused her death; in assisting the birth of unwelcomed girl babies, and in cleansing and binding up foul ulcers and offensive spoiled feet; in treating suppurating ears and pulling decayed teeth, when it never leads to the conversion of

any one!" And she longs unspeakably for the cool green woods and clovery meadows of the home land. Then from some unexpected source she catches a glimpse of the fruits of her labors and is satisfied. In his prayer one morning our night watchman mentioned the case of a little boy from a distant village who was operated upon in the hospital last year, saying, "Father knows how there wasn't one believer in that village when the boy came to the hospital, and now there are not a few. We beseech Thee to give Wang Lao T'ai T'ai strength to preach to all the patients, and the doctor skill to cure their diseases, that all villages to which patients return from the hospital may become Christian."

STATISTICS.

Number of dispensary prescriptions	2,513
" " house patients	28
" " out-calls	43
Fees received, U. S. gold	\$34.13

RACHEL BENN.

We are now in a position to pass under review the work carried on at our hospital during a period of five years. The accompanying condensed statistics of these five years show how the work has grown far beyond our thinking and far surpassing our highest hopes:—

	Out-patients.	In-patients.	Operations.	Subscriptions.
1901	2,583	160	47	£ 42 4 0
1902	8,356	256	81	144 10 0
1903	7,571	279	74	101 7 0
1904	9,348	341	106	194 3 0
1905	11,131	419	143	164 5 6

And these cold figures tell but a small part of the story, for they are silent as to the love, and affection, and increased confidence of the people which we know we have won. So pressing has been the call for increased accommodation this year that we have been compelled to remodel the plan of our wards and to purchase new beds.

This new arrangement enables us to take in seventy patients, compared with fifty formerly, and with the exception of the foreign ward, these new beds were immediately filled, and, at the time of writing, we have in many cases to require patients wishing to come in to delay until beds are empty and ready for them. The increased confidence of the people in the foreign doctor is abundantly shown by the larger numbers attending the hospital, but more particularly in the more frequent calls upon us to attend the officials in the city.

These increased attendances have practically prevented us from continuing our much-loved country work, and now the fact of the matter is that in our daily work in Ichang we see a far larger number of patients daily than we should ever have at any of our country stations. We are constantly having patients come in from distances of over 100 miles, recommended to us by some friend of theirs returning home cured, and telling of the wonders of the foreigner's hospital; for our common every-day surgery is a real miracle to those who only know the crude and empiric methods of the ordinary Chinese quack.

It has also been found necessary this year to fall in with the demands of Chinese etiquette and have the women's ward in a separate building from the men. The "isolation ward" was therefore prepared for them, but this is insufficient to meet the needs, for it can only put up some fifteen patients, and should an epidemic occur, then the women will have to go.

We have also proved the impossibility of our attempting to give anything like an adequate training to our native assistants. It was at one time our desire to take them gradually through the whole medical curriculum, probably

completing their course in some eight years. But we find it impossible to efficiently undertake both the regular hospital work and the training of students; either the one or the other must suffer, and so we have dropped the systematic training of our native nurses, and confine ourselves to giving them practical clinical instruction in the wards and out-patient department day by day. By so doing we reserve to ourselves some time every day for medical reading, which is absolutely necessary if a man would keep himself abreast in the rapidly evolving days, when our medical science is advancing by such mighty leaps.

In a few years, if our funds permit, we hope to send our most promising student to one of the medical schools now being established in China for a full five years' course of study, from whence he will return to us, fully able to share the responsibility of hospital work, and will then set us free to alternately visit in our country stations.

The out-patients brought their usual quota of amusing incident, though in most cases a knowledge of Chinese is essential for an appreciation of the humour. Those who know the language will doubtless appreciate the following bon mots; and more especially when we state that the questioner in each case was not a foreigner, but a native assistant:—

問、你貴姓。答、我心裏跳。

問、你有幾歲。答、我不喝水。哎呀、我問你幾十歲。他答、哦、我黑打睡。

問、你要買一個瓶子。他出去買一個餅子。

問、你照這個單子搽藥。他說、我把這個單子楊到。

Ignorance gives the rise to incidents anything but humorous, and as far as the patients are concerned with almost tragic consequence. As for example the case

at present in the wards of a poor ignorant tracker, whose knee joint was irremediably damaged through the falling of a great stone in the gorges. Amputation through the thigh was necessary, and at the operation all went well. The next day he was carried into the operating room to have the temporarily inserted drainage tube removed, and to our horror made his appearance holding the naked stump in his unwashed hands, having removed the bandages and dressings as he was being carried along. Needless to say his wound became septic, but fortunately only mildly so. Another patient finding an abdominal wound very irritable, a day or so after operation, managed to worm his nails under the bandages to obtain relief. He nearly lost his life in consequence, and of course blamed us. But though such cases try one's patience, and often disappoint us sadly, when the greatest care possible has been taken to make our operations successful; yet the majority of our patients are very obedient, and give very little trouble indeed. Except in the case of opium smokers, whose nervous system has become, as it were, devitalised by the drug, they bear pain very stoically, demand the minimum of attention, and gladly help each other in the ward. When once a Chinese has summoned up sufficient courage to enter the hospital, he trusts the foreign doctor implicitly, treats him with greatest respect, and listens to his teaching with an avidity and earnestness rarely to be seen outside the walls of the hospital. Of course all men do not speak well of us, and some of the Chinese oppose and slander us on every occasion.

WOMEN'S WORK.

We have each year been able to speak of the evidence of a gradual increase in the confidence of the

people, with the resulting steady addition to the number of patients. For some reason it has been more marked this year, almost on the principle of compound interest, and doubtless because we have visited some of the highest officials in the city. On looking back over the work in a general way we seem to remember most vividly the slave girls. For a long time they formed quite a large and important section of our out-patient and in-patient practice. They do not come of themselves, but are brought by their wealthy owners, who are willing and glad to pay for their board and treatment, not only to have them recover and so get more use of them, but in many cases to get rid of a burdensome stranger whom they recently bought. This influx of slave girls was caused by the recent famine in the west, and the illness itself was in quite a few cases due to starvation, or indiscretion in diet so soon as they had left the famine districts. All hospitals on the river find the slave girls a very interesting and a very needy class. One can heal them perhaps, but can do little or nothing to raise them mentally or spiritually except what they are taught for the short time they are under one's care. There is a very wide scope for mission work if one could buy them and free them and educate them. We have just heard of thirty being shipped down by one steamer from here to the lower river ports. One would have to be willing to lay one's self open to the charge of dealing in slavery (or rather emancipation) and would need a great deal of money for the upkeep of such a scheme. They look hopeless and downtrodden, but they are eminently teachable and at the best age for development.

For the in-patient work we have found it convenient with such an increase in our numbers to have

two small rooms than one large one, so we have used the isolation wing instead of the former women's ward this summer and winter. At present one ward is used for children and one for women, but our usual aim is to keep one for medical or aseptic cases and the other for the less particular ones. Both are filled just now, there being thirteen women and children and two infants.

MEDICAL NOTES.

A recent criticism of medical mission hospital reports said that "they make excellent reading as Sunday school tracts, but as hospital reports—never." The following paragraphs, which lay readers are advised to skip, are an attempt to remedy such a grievance:—

During the five years of our work in Ichang what has struck us, far more than the strange diseases we see, is the absence, partial or complete, of many disorders which are reckoned very common complaints in England. We have never yet seen typhoid in a native. The only cases in our hospital have been in foreign sailors just up from Hankow. Is it that the Chinese never drink milk? We have heard it stated that the only cases in Chinese occurring in the larger ports are in those natives who ape the foreigner and, like him, drink milk. Statistics in Hankow or Shanghai should soon be able to prove this. Scarlet fever and whooping cough we have never seen in Ichang. Rheumatic fever, too, we have not met, although chronic rheumatism, muscular rheumatism, and rheumatoid arthritis are far from uncommon. This seems to point to the essentially different nature of the organism or toxin of rheumatic fever to those of the allied conditions, which seem allied only in name. Gout is even rarer than in Scotland, and perhaps

for the same reason that the favourite intoxicant in China is a spirituous, not a fermented liquor, although the "superfluity of foods and drinks, the luxurious appliances of civilised life, and the trifling bodily exertion" are amply present in the wealthier homes. Diabetes we have never met, either mellitus or insipidus. Rickets in children seems very rare; we only recall two cases, due seemingly to the excessively starchy diet and the poverty-stricken homes. Cancer is markedly uncommon as compared with the numerous cases met with in our home hospitals. We have not seen more than a dozen cases during the five years. Sarcoma, however, is quite common, the favourite sites for this tumour being the lower end of the femur and the antrum of Highmore. Melanotic sarcoma is also frequently seen, but in the majority of cases the patient will not believe our serious prognosis and refuses operation until too late. Appendicitis has not evolved so rapidly as it seems to have done in Europe and America. We can report no case of gall stones. Lobar pneumonia is also rarely seen, but we have had one or two quite typical cases. Valvular heart disease is extremely common, but the rarity with which the aortic valves become affected is a matter for surprise. All our cases have been mitral or tricuspid. The extreme frequency of specific disease in China, and the lengths to which it is allowed to run untreated, would lead one to expect a correspondingly large proportion of those diseases of the nervous system which in the "books" are attributed to that poison. But locomotor ataxia and its allies, general paralysis and other insanities, are markedly uncommon. Are these nervous diseases due then, not to specific poison, but to specific treatment?

We would be glad if all our medical confrères in malaria districts would join with us in the experiment of treating ordinary attacks of benign malaria with cinnamon. We do not claim originality in the use of this drug, for we fancy we saw it advocated in some Indian medical journal. In our hands it has proved quite as effective as *quinine* in certain cases, while in a small minority it has undoubtedly failed. Repeated blood examinations have revealed the entire disappearance of the malarial plasmodium under its use. We still need to discover the reason of its failure in certain cases, and this will soon be effected if other observers will try the treatment. We prescribe *pulv. cinnamomi* in five to ten grain doses t. d. s. Compared with *quinine* it is considerably cheaper, has no evil after-effects, and is much more palatable, especially for children. The most marked case we have yet had was that of a foreigner with a most pronounced idiosyncrasy against *quinine* if taken by the mouth, and who was treated in Shanghai solely by hypodermic injections of *quinine*. His blood was full of tertian parasites, which vanished after the exhibition of fifteen grains of *pulv. cinnamomi*. We have also used the same drug this summer in dysentery as advocated from Shanghai, and can corroborate the good results there reported.

We can also recommend to all hospitals in China who have not used it the adoption of *ethyl chloride* as a general anæsthetic for short operations. The expense seems the only deterrent, but for patients who demand anæsthetic for teeth extraction, opening abscesses, and other minor surgery, and who can afford to pay for it, will be found most useful, the extreme rapidity of its action being a great point in its favour when one's days are over-

flowing with work; and wanting as we in the East do, nitrous oxide gas, its use seems ideal and unattended with danger.

EVANGELISTIC.

Besides afternoon teaching there are also morning and evening ward services as occasion allows, and every morning there is a preacher

for the out-patients who assemble in the waiting-room. The good seed of the kingdom has been sown gladly and unstintingly. Some doubtless has lodged by the wayside, other on stony and thorny ground, but other on good ground, which in honest and good hearts who keep it will bring forth fruit unto life eternal.

Correspondence.

The Central China Medical Missionary Association has reached

C. C. M. M. A. Report for 1905.

the close of another year; and although the number of meetings held has not been so large as in some previous years, yet we believe they have been helpful and stimulating to those who have been present at them. Fourteen meetings were planned, but owing to pressure of work and unexpected engagements only nine of these could be held, the average attendance being 6.2. At the business meeting held in December last the following office-bearers were appointed for the year 1905:—President, Dr. Booth; vice-president, Dr. McAll; secretary, Dr. Ruth Massey; treasurer, Dr. Huntley.

The papers and topics discussed dealt with the following subjects:—

- Ascites and Dropsy.
- Cocaine Anæsthesia.
- Notes on Hospital Cases.
- Emergency Surgery.
- Medical Post-graduate Work.

There have been three clinical meetings, and cases were also exhibited at the other meetings, making a total of about fifty cases either seen or reported on. Among the most interesting were the following:—Wound of the chest, narrowly

escaping the pulmonary artery; multiple keloid after a burn with *nitric acid*; several cases of new-growth in the rectum; a large tumour over the upper end of the sternum, either sarcomatous or gummatous in character; umbilical urinary fistula; and a large malignant tumour of the breast with loud systolic murmur in the aortic and pulmonary areas; this murmur entirely disappeared after removal of the tumour.

The pathological specimens shown included a cystic growth removed from the parotid gland; sarcomata of both upper and lower jaws; and melanotic sarcoma removed from the groin.

The crowning event of the year has been the completion and publication of the Manual of Nursing (護病要術). For the editing of the work in Chinese we are deeply indebted to Rev. W. A. Cornaby, to whom we desire to express our gratitude for his generous help. It is hoped that this book may prove acceptable to those engaged in training nurses in China and may lead to greater efficiency in our mission hospitals.

At the close of last year we lost the help of Dr. Davenport's presence at our meetings owing to his removal to Shanghai; but we are

glad that by correspondence he still maintains a close connection with the work and interests of the Association. During the year Dr. and Mrs. Gillison and our president, Dr. Booth, have left for home, but we have the pleasure of welcoming Dr. Hodge, Dr. Huntley, Dr. Glenton and Mrs. Rowley on their return from furlough; and of adding to our list of members the names of Dr. Somerville, Dr. Tatchell, Dr. Wolfendale, Dr. Emily Bretthauer and Dr. McWillie. With the stimulus that these reinforcements to our numbers bring, the Association looks forward hopefully to a further period of usefulness in the service of the sick and suffering in Central China.

PROGRAMME, 1906.

Central China Medical Missionary Association.

- Feb. 28th.—Native Medicine and Surgery and their Sequelæ.....PRESIDENT.
- March 14th.—Clinical Meeting.
- March 28th.—Discussion: *Co-operation and Specialization*.....Dr. P. L. MCALL.
- April 11th.—Tropical Anaemias.....Dr. S. R. HODGE.
- April 25th.—Clinical Meeting.
- May 16th.—Surgical Treatment of Facial Neuralgia
Dr. W. A. TATCHELL.
- May 30th.—Present Means of Medical Education.....
Dr. R. WOLFENDALE.
- Sept. 26th.—Clinical Meeting.
- Oct. 10th.—Diagnosis and Treatment of Diseases of Children.....Dr. Miss GLENTON.
- Oct. 24th.—Spiritual Aspect of our Work.....Dr. MCWILLIE.
- Nov. 14th.—Clinical Meeting.
- Nov. 28th.—Operative Gynaecology and Obstetrics.....
Dr. Miss COUSINS.
- Dec. 12th.—Clinical and Business Meeting.

AN APPRECIATION.

DEAR MR. EDITOR: The Central China medical missionaries are to be congratulated, for they have ably published a work that would be of everlasting blessing to the Chinese.

The art of nursing in China, as in the case of all unenlightened and non-Christian lands, is undervalued, unknown and treated by all with indifference. So when a person gets sick, he is really an object to be pitied; for instead of being provided with the means to fight against disease, he is handicapped by improper nursing and unhealthy surroundings. Those of us who have been to a typical Chinese sick chamber would one and all say that among divers reforms and improvements which China is making to-day, and will have to make in the near future, none is more important than that of the art of nursing, both for the sake of humanity and national happiness and prosperity.

The book—*Manual of Nursing*—published by the above-mentioned doctors, though short, is concise and full of useful information. The terms and expressions used are clear and lucid, the arguments convincing and conclusive, the statements true and bold and the style easily understandable. One chapter is as good as the other, so it is utterly impossible to say which one is really the best. It should be recommended in all schools where medicine is being taught, for this book is not only excellent for nurses, but is good enough for an average medical student with a commonplace education.

In conclusion, I must say that the nurses of our hospital are now being taught with selections from this book.

We wish it every success.

ELI DAY,
Assistant Surgeon.

St. Luke's Hospital.

CONFERENCE IN 1907.

DEAR MR. EDITOR: In the November issue of the JOURNAL you ask for opinions about the holding of a medical conference in 1907. Well, please put my name down as a very strong supporter of the proposal. For one reason especially I would vote for the conference being held then, viz., that a number of us medicals will no doubt be hoping to attend the general conference either as delegates or as private individuals; and for many of us who come from a great distance it would be quite impossible to come again, say in the following year, for another conference; therefore if they are not held about the same time we must perforce miss the next medical conference, a matter, I am sure, of great disappointment to anyone who had the pleasure of attending the last medical conference.

But may I go further and make a humble suggestion about the next conference with a view to making it more profitable.

It struck most of us, I think, that there were two weak points about the arrangements of the last conference.

1. That there was an utterly insufficient time left for the discussion of the many interesting subjects which came up; and

2. That not knowing beforehand what subjects would be brought up for discussion, we came unprepared to enter properly in such discussion.

Therefore I would propose:—That you issue at once an appeal to the members to name immediately the subjects which they would consider as important for general discussion, and to which they would promise to contribute either by writing papers themselves or by helping in the discussion of such.

Further, that all such promises should be placed in the hands of the

Committee of Management with power to choose from among them the subjects they consider most important and to settle who shall introduce the discussion of these.

And lastly, that a detailed programme should be published and sent round to all members before the close of the present year; that will at least give us time to be prepared before we come to the next conference.

Yours very sincerely,

JAMES L. MAXWELL.

TAINAN, Formosa, Jan. 12, 1905.

DEAR DR. LINCOLN: January JOURNAL just to hand. Good from start to finish. So are all I have seen. Sorry I didn't know about it on my arrival. I find it a great help to a new-comer and the many new things (not to be found in books) of China's diseases. Our work up here is entirely new and makes a fellow feel small compared with your large successful works. I have two tumor cases—one inside nose, one outside—I hope to send you presently if pictures come out good.

The people are fearful yet, and we have to be mighty careful what we tackle in the way of surgery. The Boxers were by no means all killed, and we are in danger every hour. I greatly enjoyed the editor's remarks on guarding against threats and dangers, but we have a *fine viceroy up here*. Long may he live, and *as long the foreign guards*.

Yours fraternally,

J. L. KEELER.

CHANG-LI, Jan. 21, 1906.

DEAR SIR: The report of some interesting obstetric cases, in the recent JOURNAL, is freely given, to offer and receive suggestions. With

that motive the articles, etc., in the JOURNAL are certain to be of great value. Concerning case No. 5 I think that a better course of treatment would have been if Dr. Menzies had *delivered earlier*. He was satisfied that the presentation was a R. O. A., but does not tell us *the size of the diagonal conjugate*. To me all future actions would have been suggested and based on that knowledge. Nearly thirty-seven hours after labor commenced, "the os being pretty well dilated, pains recurred every two minutes." There is another point. He would have injected saline solution, "but had no apparatus ready." None is needed. I have several times used with success merely a saline solution, viz., a teaspoonful of salt dissolved in a pint of warm water and injected about six pints into the rectum. A teapot forms an admirable and useful instrument for the operation. The solution can be prepared and operation performed by anybody.

There are several other points about which I am not quite clear, *i.e.*, the urticaria, healing of a *complete* rupture of peritoneum without surgical interference etc. etc., but already my letter is too long and very strong. He "ruptured the membranes when less than an ounce of fluid escaped, but the head made little or no advance." Non-delivery under such conditions could only be due either to obstruction, *i.e.*, contracted pelvis or tumour, or else abnormally large and unyielding head. Ascertaining the diagonal conjugate would have revealed the former. If the latter, turning, at an earlier stage, before rupturing membranes. Whichever was the cause I think prompt

emptying of the uterus *earlier* would have been better treatment.

It is the first case I've known where by *continuously and firmly compressing the uterus* hæmorrhage has not been arrested. Pressing on the abdominal aorta at the same time by an assistant often proves useful.

With kind regards,

I am,

Faithfully yours,

W. ARTHUR TATCHELL.

HANKOW, Jan. 27th, 1906.

DEAR DR. LINCOLN: Enclosed is the sheet of statistics for 1905, with apologies for delay in sending it. The January number of the JOURNAL contains an interesting article on some midwifery cases by Dr. Menzies. I hope more of the veterans will find time to give us points from their varied experience. I have just been attending a case of eclampsia, the patient well advanced in labour, which was quickly terminated by forceps, while chloroform promptly relieved a severe fit.

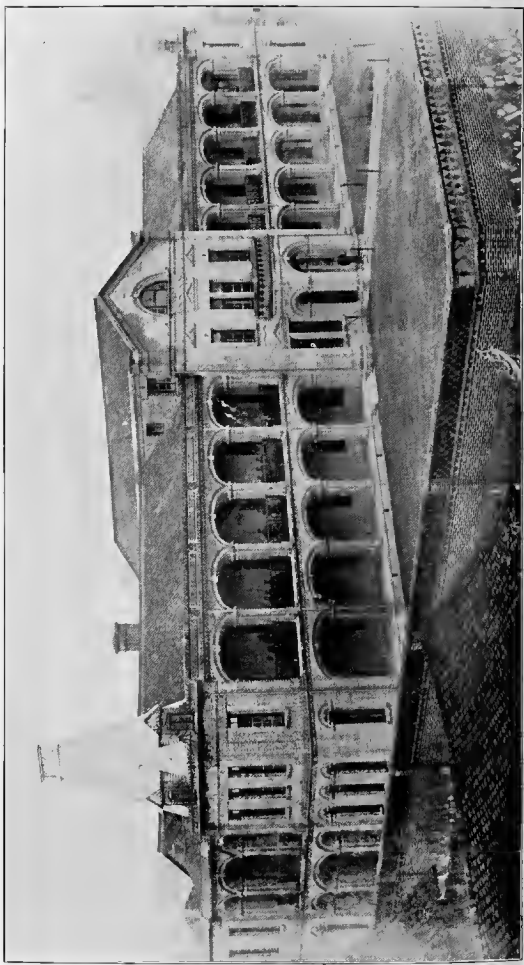
The perinaeum was ruptured—the first ruptured perinaeum I have seen in China—but the external genitals were so dropsical I thought stitches would not hold, and did not attempt any. I find *lysol* a very valuable antiseptic in obstetrical work, and now-a-days as a routine measure give a vaginal douche first thing, before examining to try and counteract the sepsis of the old midwife.

With kind regards and every good wish for the coming year,

Yours sincerely,

S. B. KEERS.

CHIN-CHOW, February 21, 1906.



THE NEW HOSPITAL OF THE FREE METHODIST MISSION AT WENCHOW, CHINA.

The China Medical Missionary Journal.

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Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

“FREELY YE HAVE RECEIVED!”*

*Somewhat about Native Methods of Medical Practice in China,
and a Comparison.*

By W. H. JEFFERYS, A.M., M.D.

It is a fact well known to medical men that scientific medicine has derived a few of its most useful agents from those whom we are in the habit of calling primitive races. *Quinine, calabar-bean, opium, cocaine* and several other of our trusted drugs were received, so to speak, out of the very hands of peoples less civilized than ourselves, and having passed through our laboratories have taken their place in the larger practice. It is altogether natural, then, that those of us who have chosen to devote ourselves to the planting of scientific medicine in China, and stand on the firing line of her progress, should look with keenest interest to the native practice of the land for something of worth in the treatment of disease, which may pass through our hands into the service of the world at large. This has been the hobby of many a medical missionary. It has proved a fascinating study, but in China, alas! a comparatively profitless one. It is a disappointment to us to be compelled to report that the splendid race of men which, even in a material way, has given to the world gunpowder, the printing press, the mariner's compass and other priceless treasures, has, up to the present time, afforded us nothing in the treatment of disease which is not already in better form in the hands of our profession. It is true, for instance, that the Chinese inoculate against small-pox, that is, they inoculate the mucous membrane of the nose of a child with the dread virus itself, in

* An address delivered before the Churchmen's Club of the Diocese of Maryland, Baltimore, April 27th, 1905. Reprinted from *The Spirit of Missions*.

order to produce the disease, small-pox, in the child, because they believe the disease is apt to take on a milder form if thus induced. They argue that as he will surely have the disease some time, he had better have it in early childhood and get done with it. But there is no comparison between this and the cleanly vaccination with cow-pox to prevent the greater evil. Yet, I say, the study of the medicine of China has its fascination, as well as its application to the question of medical missions there, and I have therefore thought to speak to you briefly concerning the native methods of medical practice in China.

I allude, of course, to the old empirical practice of the land—a practice which finds its origin away back in the beginnings of history, which is crowned with the honorable gray hairs of centuries of work, which has the faith of the nation which it serves. Let me then make two things plain to you at the outset. First, that I bear no manner of grudge against that practice. To the best of its ability it has served the Chinese people for centuries and cared for their sick. For the fact that the best has been a poor best, the poverty of the Chinese, their seclusion and the lovelessness of their religious faith will win our forgiveness. Of those to whom so little is given, little must be required. Secondly, you will note that if we are to speak fairly and in a truly scientific spirit of the medicine of China, we must speak of the purest of its practice and not confuse the regular practitioner with the man who sells dried horrors on the side-walk. It is probably true that there is not a native doctor of the old school who does not time and again resort to charms, talismans, fake and quackery, and it is certainly a fact that the whole practice is fairly swamped in a mire of superstition such as the world has rarely, if ever, seen before. Yet, I maintain that, strictly speaking, it is no more fair to include these things in a discussion of the Chinese practice of medicine than it would be if, in speaking of our practice, they should include the irregular practices of Christian science or of hydropathy, or any other kind of diluted science; or if, in speaking of our religious faith, they should include Mormonism or Dowieism or any other kind of unrefined humbug. That some doctors in China use the fortune-teller's disk does not make the disk a medical instrument any more than the fact that some of our benighted legislatures call certain fads systems of medicine, will make the wiggling of bones cure brain abscess or appendicitis.

THE GREAT DRAGON FESTIVAL.

In the fourth Chinese moon, that is, toward the end of May, the nation celebrates its greatest calendar feast, the Dragon Festival—the dragon being the national beast (perhaps one should say reptile) and the

beast of good omen. In the larger cities this feast is usually celebrated by a huge procession, upon which is expended a vast amount of funds and trouble. The procession is divided into five parts, and each part is in honor of, and led by, a deity, and finished off by a long dragon. These five deities are the personification or spiritualization of the five natural elements—*K'ung*, metal; *Mok*, wood; *Sz*, water; *T'oo*, earth; and *Hoo*, fire. As they are the five elements of Chinese nature, so they go to the complete make up of the human body, its chemistry and its physiology. Health—that is a proper balance of the five elements. Disease—that is an improper balance. Too much fire—that is fever. It takes a great deal of water to cool it down. Too much water—that is dropsy, and it takes a whole lot of earth or fire to do away with that. This is pathology in a nutshell.

It is ordinarily supposed that the Chinese have no idea of anatomy, because they do not dissect the human body. But they do know pretty well where the larger organs lie. They know that the heart is here and the lungs are here; that the stomach is there and the liver there. It is true that they have overlooked the very existence of so important an organ as the pancreas, and that their knowledge of histology is strictly limited to the future, yet they cannot be said to know nothing of anatomy. It is rather in the relationship and function of the organs that they seem to have gone hopelessly astray. The heart thinks; the liver is the seat of the soul, and has nothing whatever to do with digestion; courage resides in the gall-bladder and so it comes about that bile is the medicine to sustain the faint-hearted. To this end there is no comparison between the bile of a tiger or of a brave, but executed, robber and the bile of a mere haa-lamb. The spleen aids in digestion and food passes through it into the stomach. The large intestines are connected with the lungs, the small with the heart. Tendon and nerve have the very same name, *kyung*. And this is the basis on which the Chinese does his therapy.

HOW TO BECOME A PHYSICIAN IN CHINA.

To become a physician a Chinaman states to his friends and neighbors, "I am a physician." This is the limit of required preparation. His diploma is the more or less handsome sign-board which announces his determination to the neighborhood. It is a fine start for a man if his father was a physician before him, not, however, because of supposed inherited professional gifts, unless his father's prescribing manual be considered in this class; and as for a grandfather and two books of prescriptions, that is unspeakable riches, if not wisdom.

Ethics ! As far as I can make out, there are two points in Chinese medical ethics. First, never do any earthly thing for anybody unless there is money in it, and make your deal in advance. This gentle custom puts charitable works utterly beyond the pale of common sense. Second, if by any lucky chance you should discover, or make folks think it, a professional secret of value ; as you long for the worship of your children's children, keep that precious secret hidden in the very deepest recesses of, I suppose I should say, your liver, lest some other human being than yourself should make money out of it. Then, as the old physician draws near to his appointed time, he will call to him his eldest son and, in all the solemnity of the hour, reveal to him alone the treasured secrets of his life. In case, however, he should be so unkind as to depart this life without due notice, and without having performed this last great duty, it will not really affect the question materially, for the son will claim to know the secrets just the same.

HOW A CHINESE PHYSICIAN TREATS HIS PATIENTS.

When the doctor receives his patient he places him opposite his august self at the table and begins and ends by feeling his various pulses, two at a time, for these alone are sufficient to reveal to him the entire internal situation. A strong pulse—that means this organ is so ; a weak pulse—that organ is thus ; a middling-sized pulse—well, that means something still different. He may ask a question or two to pass the time of day. It does not matter much, for what he cannot tell from the pulses is beneath any mortal use. And then he writes his prescription, and then he collects his fee, if he has not already attended to that little formality, as he probably has.

A TYPICAL CHINESE PRESCRIPTION.

My assistant, at my behest, went once last winter to consult a native practitioner for a severe cough and allowed himself to be prescribed for. Here is the actual prescription on paper and also as put up by a Chinese pharmacy. It gives the patient's name, then the diagnosis of the trouble. This is followed by a statement of the condition of the pulses on which the diagnosis was made. Finally it calls for the thirteen drugs which I have put into these thirteen foreign bottles, partly for convenience, but chiefly in order that I might live in the same house with them, and other Chinese drugs. They should each be wrapped in a separate white paper and then all together in a red sheet. The thirteen drugs are as follows :—



SOME TYPICAL CHINESE REMEDIES.



"SHOT-GUN" PRESCRIPTION FOR A COUGH.

Baked barley,
Sugar,
Mashed beans,
Bamboo shavings,
A root,
Another root,
Still another root,

Chalk,
Melon seeds,
Mashed and fermented
melon seeds,
A mashed pebble,
Some wild flowers,
A broken clam shell.

The prescription calls for the boiling together of these ingredients in a large quantity of water and for the whole to be taken rapidly at one dose. That for a cough! It does seem as if the doctor must hit the mark somehow, with so many shot in his gun.

Other drugs in common use are cock-roaches, fossils, rhinoceros skin, shavings, silk-worms, crude calomel, human secretions, rhubarb, asbestos, moths, oyster shells, maggots, centipedes, caterpillars, toads, lizzards and cicada shells. Just why cicada shells should be the great nervous sedative of China it is not easy to see. It is true that their ideas of music are not the same as ours, but, have you ever heard a chain gang of cicadæ get really down to solid work on a hot summer night? And the shells are the weapons with which they do it all. In most of their animal drugs the Chinese are strictly homeopathic in aim, barring dosage, as when they give tiger's bones as a tonic in debility, because the tiger is such a strong animal; but this cicada business seems to work on strictly allopathic lines.

As Dr. Williams says, "anything indeed that is thoroughly disgusting in the three kingdoms of nature, is considered good for medicinal use," and the worst of it all is, they do not just take medicine as we do, they literally and truly "eat" it, so large is the size of the average dose. The word for this function in China is *Chuh*, to eat. I have a Chinese pill, a tonic for the weak, and it measures an inch across and weighs half an ounce. Here are smaller ones for bronchitis. The dose is about one hundred and fifty pills. Here is the dragon-festival powder, of which the average dose is two tablespoonsfuls to a man, at the feast, to keep off evil spirits, which is of course considered a distinct disease by the Chinese.

Such is the *ne k'oo*, the internal medicine of China.

Chinese hygiene is almost unspeakable. It is said that one smells China a hundred miles out to sea. A fellow-missionary used to send outside of the city gate of Wusih every day to get his drinking water where it was supposed to be a bit less terrible than near his house, the natural place for a native to take it from. I happened one morning to be passing through the gate and took a photograph of the crystal stream. There was a huge dead dog in the centre of the picture. Now, my friend probably gets his water from some other spot, but it is a matter of mere sentiment after all, for, aside from the idea involved, it is not

probably that he has improved his condition a whit. If it is not dog, it is something worse. The facts that the nation lives out of doors, that it does not drink milk at all and never drinks cold water, are probably responsible for its being "still about."

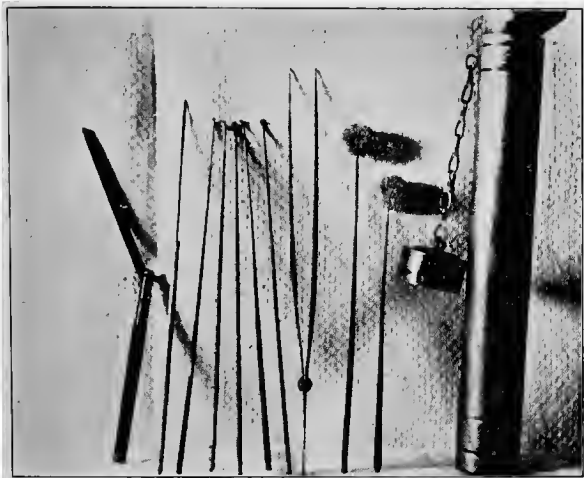
THE TREATMENT OF "OUTSIDE" DISEASES.

Surgery, *nga k'oo*, or external medicine, is represented by several procedures, operative and otherwise. Such a poultice as half a raw chicken is common, and nearly every patient that comes to us has one of the large gummy opium plasters on some carefully selected spot. These latter have probably the suggestion of therapeutic value. A set of surgical knives is represented in one of the photographs. They are, however, never used to cut, but merely to dig and gouge. Practically they are chiropody instruments. Why do they not cut with them? Simply because they cannot control hemorrhage. Our patients do not, except when they come directly from some foreign *hong*, show that they have even the knowledge of the stick and handkerchief tourniquet. They usually stuff the wound with tobacco, earth, or a filthy rag. If a member is all but removed by accident, the Chinese have been known to assist mildly in severing the last link.

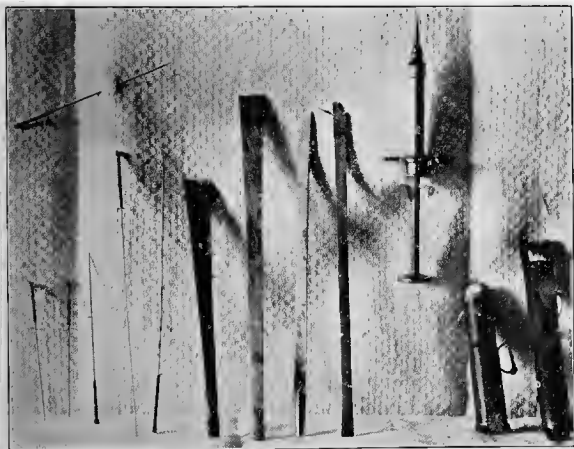
THE DEADLY ACUPUNCTURE NEEDLE.

The surgical instrument best known to the Chinese is the deadly acupuncture needle, and I say "deadly" with the full weight of the word. It is used to produce counter irritation, and there are one hundred spots known to the surgeon into which it may be stuck without resulting in immediate death. The muscles are the favorite choice, but I have seen the result of these filthy needles having been passed into hernial sacks, and I have had two patients come to us for treatment for general infection of the eye which was caused by these needles having been passed clean (or rather dirty) through the eyeball in the treatment of trachoma. It is needless to say there resulted all that could be desired in the way of a handsome counter irritation, and that the total loss of the eye in each case was the end thereof. For this, however, the Chinese surgeon did not take the blame, because the patient could still see a little two days after the operation. Abscesses are treated by the needles, but if, by any chance, anything threatens to leak out of the abscess through the puncture hole, the surgeon immediately slaps on a large plaster to stick it up tight.

Time fails to tell of all the marvels! How they make incisor teeth and tie them to the adjacent eye teeth by means of catgut; how they



A SET OF EYE AND EAR CLEANERS.



SURGICAL KNIVES, NEEDLES, AND A HOME-MADE HYPODERMIC.

operate for entropion by pinching the eyelid between two bamboo sticks and binding them tight with thread till the skin becomes gangrenous and finally drops off, a procedure which may help matters somewhat, but which is horribly painful, and often results in inability to close the eyelid; how they use a set of sharp and filthy instruments to remove wax from the ears, and by scratching or puncturing the drumhead bring about half the worst ear disease of China.

Such is the old empirical practice of China! Have I treated the subject triflingly? The laughable side of Chinese medicine begins with the quackery and superstition which I have not even touched upon. In them there lies a wealth of the bizarre, such as would make the foregoing read like Baxter's *Saint's Rest*. I asked a Chinese once whether this was a strictly fair picture of the medicine of China. The answer was, "Perfectly so, so far as I know, except that in the province I come from, we do not have things quite so nice. In fact some of these instruments, our surgeons do not know yet." Fortunately, I thought in my heart. No, this is the serious part! This, of which I have told you, is the deadly earnest part, and though you have found somewhat to smile at as you have listened, underneath my words you must have heard a terrible cry for help: Women in the agonies of impossible labor, the insane chained or in cages, blind girls sold into the hell of Chinese slavery, blind men standing on the streets who, when they hear the click of the foreigner's heel on the pavement, still cry aloud "Master, Master, have pity!"

SCIENTIFIC MEDICINE IN JAPAN.

Sixty years or so ago, the very name of scientific medicine was practically unknown in the Empire of Japan. They, too, used some form of this old empirical practice, and I understand that they derived it in measure from China. Then scientific medicine was offered them as a substitute for the old, and was largely introduced by medical missionaries not only into civil practice, but especially into both the army and navy. Was it worth the trouble? It depends, does it not, on what we think of scientific medicine, the practice to which truth is all in all, which has a code of ethics making it a professional crime for a man who knows anything worth the knowing to hide it from the world's free service, the practice which studies its anatomy with a one-twelfth powder oil immersion lens, which invented vaccination, diphtheria antitoxin, and the inoculation to prevent hydrophobia; which invented X-rays, anæsthesia and asepsis by means of which, even in the heart of China, we remove tumors larger and heavier than our patients' bodies,

and the patients live back into health; the practice of Osler, of Halstead and of Kelly, and of the hospital of Johns Hopkins University. You who live in the centre of the great light, I need not tell you what it is. Was it worth while to give it to the Japanese? The American Church and her missionaries thought so, and the Japanese think so too, and to-day the old practice is against the law of the land, and I doubt if one could find it even in the Hokkaido. Was it worth while? We are sending envoys out to Manchuria to learn how the Japanese army and navy medical corps do their work so excellently.*

CHINA SIXTY YEARS AFTER.

And how about China? There are already 250 or more mission hospitals and dispensaries, over 300 foreign physicians, some 5,000 trained native assistants, and we treat over 2,000,000 patients a year. I know a native in Wusih, practising good scientific medicine, charging small fees and making \$5,000 a year. Last winter, in St. Luke's Hospital, Shanghai, in my surgical wards, several months went by without our having an empty bed over night.

Sixty years from now, if we do our duty, we shall look for the old empirical practice in the Chinese empire, and shall not find it with a Lick telescope.

WHAT CAN BE DONE FOR THE ARMY OF CHINA'S BLIND?

The day of argument for medical missions is in truth past and gone, and those who do not believe in them simply do not know. Yet, in the comparison of these medical methods, the old and the new, every reasonable man must surely find good ground for the renewing of his faith. There is in it no appeal to the emotions. Yet, if I could, I would take you men into the wards of St. Luke's Hospital for a time. Every little while there comes into the hospital a man with, let us say, cataract. He is blind, has been blind for from five to twenty years, and there is no more agonizing blindness than that of the man who used to see. He is admitted, and after due preparation, under *cocaine* and by means of the most delicate and most beautiful operation in all surgery, we remove the cataract. Within the space of ten minutes he looks up into our faces and says: "*Tong-ka, ngoo k'o'en tuh kyien kuh!*" (Master, I can see!) And a month later he is sitting in our office reading the newspaper. This is a matter of the emotions, but there lies in these common incidents of hospital life a warrant for medical missions, in the white light of which

* The Emperor has just decorated Dr. Hepbourn on the occasion of his ninetieth birthday.

all fine financial calculations and every scientific discussion inevitably shrivels up, as mere words in the presence of works, as dead things give place to the living. There waits in China to-day an army of 100,000 blind, perfectly curable men, women and children, and there they remain, day by day, year by year, in their unending night, waiting, waiting, waiting.

And bound up with this question is that larger one, yet like it. Is it worth while to present our faith to the Chinese people? Here again it is a question of what we think of it, of our faith. Is our great Ideal of human life worth giving to the Chinese? Each must settle that question for himself. The church, of course, has taken her stand. It will take longer than to give them scientific medicine, but then the goal is in the stars. It has taken 1,600 years to make England half Christian, and it may take as long in China, but even so, when we call to mind many a Christian home in China and compare it with its heathen neighbor, when we compare the worship of the joss-house with the worship of the Holy Trinity, when we but think of the character of Jesus Christ, even the Man, we missionaries have no doubt that it is unspeakably worth while, as worth while as the work of St. Paul in Rome, of Augustine in England, as worth while as anything in the world that a man can give his life to. But you say we missionaries are enthusiasts. Well, so be it! I, for one, plead guilty. But I tell you that, down on the bed rock, it is not a question of enthusiasm, it is a question of what each in his heart really thinks about *The Man*.

I have already said of the Chinese people, with regard to their medicine, that of those to whom little has been given, little will be required. The same is true of their faith. But to you, men of Baltimore, I would say, to you who live in the very centre of the land of promise, in your midst is the heart of the practice whose central love is "Truth," around you, on every side, is the Faith, whose central truth is "Love." It is a living, burning truth that to you "to whom much has been given, of you shall much be required." There is no possible escape from the responsibilities of God's circumstances. Of you it will certainly be asked, "Where are" not the one, but "the ten talents?" You had in abundance, and they were in want, and you gave it freely; or else, you did not. "I, Christ, was blind and ye visited Me," or else, "ye did not."

The other day, a mission Sunday-school class sent us \$8.50 for St. Luke's Hospital, Shanghai, and in acknowledging it I told them that

with that sum I would, God-willing, restore the sight of a stone blind man. Eight dollars and fifty cents is not a great deal of money, but from some tiny children, whose love reached away out into China, it is a fortune of love. Really this country of ours is beginning to give! And I look forward with faith to the time when she will have taught to the world the imperial lesson of giving royally, when, without thought of cost, of wealth, of work or of life itself and in something of the glorious selflessness of the Master Physician, having freely received beyond every nation the world has ever seen, we shall also have freely given.

ETHER BY THE DROP METHOD.

By O. T. LOGAN, M.D., Changteh.

Although this method has been in use for almost a decade, the writer had never heard of it until about a year ago, when an article appeared in the *New York Medical Journal* of November 12th, 1904, entitled "Observations Drawn from Eleven Thousand Anesthesias," by Alice MaGaw, anesthetist to St. Mary's Hospital (the famous Mayo Brothers' Hospital). In this article the writer gave some interesting and practical suggestions that have been of great assistance to me. I venture to quote some of these. She writes: "Giving an anesthetic outside of the operating room is a thing unheard of in St. Mary's Hospital, for we believe that it is important to prepare the patient for the surgeon while he or she is taking the anesthetic, and we know that we can procure a more rapid surgical narcosis with less of the anesthetic. For instance, our abdominal cases, even those in the Trendelenburg position, prepared on the table during the administration of the anesthetic, will become relaxed in much less time and with less of the anesthetic than the gynecological and rectal cases, which cannot be prepared or put into position until after the patient is asleep. We find that this method is safer and more satisfactory in every way, as we are sure that the preparation is an important factor in occupying the attention of the patient and thus enabling us to hasten narcosis."

The method of giving *ether* by the drop method is described as follows: "A thick pad of moistened cotton is placed over the eyes to protect them from the anesthetic. The inhaler used is the improved Esmarch mask, with two layers of stockinette; the mask should be boiled and the stockinette changed after each patient. In the administration of *ether* we commence with the drop method as slowly and as

carefully and with as much air as though we were using *chloroform*, and continue until the patient's face is flushed. We then add a few layers of surgeon's gauze and give *ether* a trifle faster until the patient is asleep. We then remove the gauze and continue with the same covering as at the start. After complete narcosis, it is surprising how little *ether* is required to keep the patient in a perfect state of surgical anesthesia. If there is any rigidity, the patient is not fully etherized. Cutaneous sensibility may be tested by pinching the skin. The indications thus obtained are often more reliable than those obtained by touching the conjunctive; the latter being dangerous and often infecting the eye."

One more quotation. "From experience we know that patients can be brought under *ether* in from three to five minutes, and, when ready, patients do better if the operation is started at once, as it is more difficult to keep a patient surgically anesthetized and just ready after the stage of complete narcosis; and, furthermore, it requires more anesthetic than if the operation was in progress."

We have not been able to secure such prompt anesthesia here, but, after using the method nearly a year, can testify that it is far superior to any other we have used. Its advantages, as they appear to us, are that it requires only about half the amount of *ether* that we formerly used with the cone method, and that the patient rallies more quickly and with far less nausea than with the old method. Regarding the inhaler, we wrote Miss McGaw and had her order us one such as she uses. It is a good deal larger than the ordinary Esmarch inhaler, being about five inches in diameter. Anybody with a little mechanical ability can make a mask out of wire that will answer every purpose, but the instrument maker's mask is much handier and more easily cleansed.

I will not attempt to argue with anybody who thinks that *ether* is not safer than *chloroform*. To those who may have their doubts I will quote from Warren-Gould's International Text-Book of Surgery: "The two largest hospitals in Boston, therefore, have on their records over 58,000 *ether* operations, without a single fatality, due solely to the anesthetic."

To any who claim that they cannot afford *ether*, I will point out to them that they can buy anesthetic *ether* of Merck for 7/9 per kilo. It comes in 100 gramme bottles, and two or three of these will suffice for the average case. I am not holding a brief for Merck, although I do buy nearly all my drugs from him, but, as I hope to help somebody by this suggestion, as a good brother helped me a few years ago by telling me the same thing, I pass it on.

While I am on the subject of anesthetics, I must give my hearty endorsement to Schleich's solution. I have not attempted the larger operations with this, but have successfully removed sebaceous cysts, opened large abscesses, performed operations for trachoma, tracheotomy and external urethrotomy with this solution. I have talked with many doctors in China who did not know the formula, so I will give the one most commonly used :—

Cocaine hydrochlorate	...	...	...	...	...	gr. 1
Morphine	„	...	...	...	...	gr. ¼
Sodium chloride	...	...	...	...	...	gr. 2
Sterilized distilled water	...	...	...	...	...	oz. 2
Carbolic acid, 5 per cent. sol.	...	...	...	...	...	drops 2

It is a great thing, for instance, when a poor scared woman comes in with an abscess of the breast, to tell her that you can open it painlessly and she will usually not know when you have “ moved the knife ” if this solution is injected, first into the sound tissue and gradually then into the inflamed part. Moreover, one can take his time and make a full incision, and this is a great gain.

In more than a hundred eye operations, including many iridectomies and a few cataracts, we have never used general anesthesia except in glaucoma and enucleation ; *cocaine* either dropped in, or Schleich's solution injected, being found to be ideal.



THE NEW WENCHOW HOSPITAL.

The new hospital building of the Free Methodist Mission at Wenchow was opened on January 30th, 1906. This hospital was built with funds generously provided by Henry Blythe, Esq., of Gt. Yarmouth. G. W. Bolshaw, Esq., of Southport, kindly designed the plans and sent them as his contribution.

Work was commenced early in the spring of last year, and as foreign buildings in Wenchow can be counted on the fingers, we think that great credit is due to the workmen for the way in which they have executed their task.

The building, the arrangement of which is after the style of “ Hunt's Block ” Guy's Hospital, is roughly divided into three portions—a central block and two wings ; the central block has three floors and the wings have two. The total length is 184 feet by 60 feet wide.

The ground floor in front forms the chapel and waiting-room. At the back is the entrance hall for in-patients and the main staircase

leading up to the first floor. On the first floor of the central block are private rooms and rooms for the ward boys, also a wide corridor connecting the two wings, and behind are the operating rooms. The operating room can be entered directly from the male and female wards and from the corridor in front.

The second floor of the central block is at present unfinished ; beams are laid down, but funds would not permit us to put down the floor or finish the ceiling. We hope latter on to divide this into private rooms for better-class patients. The west wing is devoted entirely to wards for male patients, and as the upper and lower male wards as well as the female ward are exactly similar in construction and arrangement, the present description will apply to all three.

The wards are 62 feet long and 42 feet wide ; there are five windows on the north side and five on the south side ; each window is three feet wide by nine feet high. The ward is divided from east to west by the central wall, which is two feet thick ; thus there are two divisions, each having a width of twenty feet. This central wall is arched opposite the five windows, but these arches, with the exception of the two end ones, do not extend to the ground. At the east and west end of the ward, where the arches come down to the floor, there is a passage way six feet wide, so that there is easy communication between the two divisions. The other arches correspond to and are of the same size as the windows, so that one gets the advantage of two wards side by side without the loss of room for a passage way, and one lavatory does for both, and in addition the prevailing summer breeze, which does much to temper the summer heat, is able to pass through the building.

There are verandahs on three sides, and the two end front towers contain lavatories below and a water cistern just underneath the level of the roof above. These cisterns collect water from the roof, which by means of taps and pipes can be used in the wards.

The upper story of the east wing, as already stated, is the women's ward, and is arranged in the same manner as the men's ward on the opposite side of the building. The ground floor on the southern side is devoted entirely to out-patient work. The northern side forms the dispensary, drug store-room, clothes and bedding store-room, students' class-room and the doctor's private office. The ground floor of the sanitary tower is divided into two portions : the smaller forms the dark room for examining eyes, while the larger half is used as a dressing-room for out-patients.

On either side of the entrance to the compound are two small houses : the one on the right as a medicine shop, where patients who

wish to obtain more medicine without seeing the doctor, can buy what they want at other than dispensary hours. On the left is the gate-keeper's lodge.

The outhouses behind the main building comprise the kitchen, bathrooms, wash-house, servants' and students' bedrooms; the wood house is beyond.

This building is connected to the main structure by a covered way.

OPENING CEREMONIES.

The ceremonies in the morning were for Christians, in the afternoon for the officials.

At ten o'clock a.m. the hospital chapel was packed with Christians from both Missions, and during the service Rev. E. Hunt and Mr. Tsie, of the C. I. M., took part in prayer. Mr. Li, the principal hospital assistant, Rev. W. R. Stobie, Rev. A. H. Sharman and Dr. Plummer also shared in the devotional exercises. The address of the Rev. W. E. Soothill was listened to with marked attention, especially when he told of his visit to Mr. Blythe and the place and manner of his gracious gift. As he spoke of his visit to Yarmouth to thank Mr. Blythe for his offer of £250, then of his amazement when, next morning, only twenty-four hours before Mr. Soothill's sailing for China, Mr. Blythe took him for a walk along the esplanade, and there and then offered to bear the entire cost of the new building, many leaned forward in their seats as if fearing to miss a single sentence. Afterwards prayer was offered for Mr. Blythe that his declining years might be years of peace and happiness, and thanks given to God for putting this thought into his heart.

In the afternoon all the principal officials and many of the gentry accepted the invitation to be present, and came in great style, making a brilliant spectacle in the hospital grounds. On arrival they were received in the consulting room, which had been prepared for the occasion. When all had arrived they were conducted into the chapel, and there a printed leaflet in Chinese characters was handed to each guest. Mr. Soothill then called on Dr. Plummer, and he read a short statement, the greater part of which was in the leaflet which had already been handed round. The following is the gist of what was read :—

This hospital is erected in order to show forth the love of God and the grace of our Saviour. In very many other places in China there are similar institutions; ours dates its origin from Mr. Soothill's first furlough, when he asked the Mission to send Dr. Hogg to establish medical work in Wenchow. Dr. Hogg arrived, and very shortly the number

of patients became so great that he had difficulty in receiving them in the crowded quarters then existing; consequently Mr. Soothill wrote a letter, in response to which Mr. Dingley generously sent out funds to build the hospital we are now vacating. After Dr. Hogg had been here seven years he returned home and Dr. Plummer was appointed in his place. During the last three years the number of out-patients treated was 33,909 and the in-patients numbered 2,056.

Recently the old hospital built by Mr. Dingley, despite enlargements, became too small; hence Mr. Soothill, on his last visit home, sought permission to raise subscriptions with the intention of building a larger hospital. He hoped to be able to collect enough to erect a new building, but to his great joy Mr. Blythe expressed his willingness to undertake the whole responsibility and provided £1,650, which in the local currency nearly equalled \$17,000. The main building, including the land, has cost over \$17,000, and in addition there have been outbuildings and furnishings.

This hospital is erected with but one aim, namely, to glorify the most high God, to show forth His grace and the love of the Saviour by the healing of diseases and the saving of men.

Mr. Soothill then spoke as follows:—

“YOUR EXCELLENCIES:—Permit me to thank you for your kind attendance here this afternoon to assist in the opening of our new building.

This hospital is erected for the healing of the sick and the preaching of the truth of God. In our Scriptures we have the command of Jesus Christ to preach and to heal. When our Lord was on earth He Himself not only preached the Gospel but constantly healed the sick. He had the great power of God with Him and healed the sick without the use of medicine. We to-day have not the same power that He had to speak a word and it is done; nevertheless we try to obey His command by using medicines to bring about the same end. Had we the power that our Lord had we should not need to erect buildings like these. Though not having that power, we still are bound by His command to do our utmost for the needy and distressed, and that is why this hospital is erected. At the same time sickness is not limited to the body; there is such a thing as sickness of the soul, and our aim here is not merely to heal the external, but the internal disease also—that of the soul.

We by no means consider this as an easy task. To heal the body is difficult, to heal the soul even more so, and we, in our own strength, cannot hope to succeed. But we know that by trusting in God, we shall receive His aid and, with that aid, we hope to continue to do some little good amongst the suffering people of this neighbourhood.”

After describing the building and its various departments Mr. Soothill again thanked them for being present, and they were then conducted round the building.

In the last ward to be entered, tea and light refreshments were served, after which the guests departed amid a deafening noise of crackers.

It will interest the friends who sent wall pictures to know that the officials appeared to be as much interested in them as in anything else they saw when being conducted round the wards.

INTERESTING CASE OF TUMOR.

By GEORGE A. HUNTLEY, M.D., Hanyang.

This patient, an unmarried woman aged twenty, came to the out-patient department of the Hanyang Baptist Hospital with a large tumor growing from the right side of the neck, which was tense, perfectly smooth, freely movable and painful, especially at night. The skin in the region of the tumor was deeply pigmented, extending from the middle of the left scapula round to the right border of the sternum, and from the top of the neck to one inch below the inferior angle of the scapula behind and to the nipple in front; also down the arm for its whole circumference to within one and a half inches of the fold of the elbow; the whole of the pigmented surface was covered with downy black hair. The tumor was $10\frac{1}{2}$ inches across and was $8\frac{1}{2}$ inches from above downwards, and was covered with thick rugose skin in great redundancy which hung in folds over the growth.

From the patient and her two elder brothers we extracted the following history: At birth there was a piece of red skin about the size of a dollar—probably a “mother’s mark”—which became slightly larger each year until about age ten. At that time it gradually became rugose and slightly redundant. About eighteen months ago she noticed a small tumor, about the size of a peanut, which gradually increased in size for about a year when it became half its present size. Six months ago it began to develop much more rapidly. Menstruation commenced about this time and ceased altogether after the patient had had three courses in two months. At age thirteen she had an abscess on the site of the tumor, which suppurated freely and healed up in about ten days. There was no pain on swallowing, and the growth did not appear to be connected with the thyroid.

The patient was introduced at the regular meeting of the Hupeh branch of the China Medical Missionary Association, when the pigmentation was thought to be due to “mother’s mark,” the pendulous growth of the skin due to lymphatic enlargement, and the tumor was generally considered to be a hygroma, and operation for its removal was recommended.

During the week succeeding this examination the tumor increased rapidly in size. The surface remained perfectly smooth, and though very tense was, nevertheless, *freely movable*. The patient suffered much pain, and operation for its removal was decided upon. Dr. Logan administered *chloroform* and Dr. Gillison operated and assisted.



Patient was put under *chloroform* and an incision made anteriorly along the whole length of the tumor, from a point about level with the angle of the jaw to a point short distance above the middle of the clavicle. On cutting through the skin and the superficial structures the bleeding was considerable; the vessels of the latter were large and peculiarly friable. At the lower end of the incision, while gentle force was being employed with the point of the forefinger to separate the tissues, a gush of arterial blood took place, which was arrested only

with difficulty owing to the bulging of the tumor, leaving the point of tear in the artery in a deep pouch. Seeing that the patient was losing so much blood an attempt was made to improve matters by rapidly enucleating a large part of the tumor. This was rendered possible by the friable nature of the envelope, although that which was left was not a true capsule, but of a nature similar to the substance of the tumor. Sponges of pressure applied, but the patient collapsed; three-quarters of an hour after the commencement of the anaesthetic and hypodermics of *strychnine* and *ether*, subcutaneous injections of saline fluid and large enema of same at 110 F., as well as three-quarters of an hour of artificial respiration, failed to bring her round. We regretted not having given a good stimulant before the operation and not having at hand larger sponges with which to check the hemorrhage. With these the hemorrhage might have been checked, the tumor rapidly dissected out, and the bleeding points attended to later. This might have assured greater success, though the increased vascularity of the region and the friableness of the vessels rendered the operation very dangerous.

The tumor on section was solid throughout, very friable, consistence of liver, but contained small spaces filled with fluid which we took to be degenerative cysts from the rapidity of the growth. There were also hemorrhages into the substance of the tumor.

THE NEW UNION MEDICAL COLLEGE IN PEKING.

By ERNEST J. PEILL.

On Monday and Tuesday, February 12th and 13th, 1906, the Peking Union Medical College was consecrated and formally opened, the opening ceremonies being full of the deepest interest to all concerned in the welfare of China.

The building was dedicated to God in an impressive religious service, in which members of all the participating Missions took part, on February 12th, and next day a distinguished gathering of Chinese and foreign officials witnessed the formal opening of the College by His Excellency Na T'ung, one of the Grand Councillors, who had been specially deputed by Her Imperial Majesty the Empress-Dowager to represent her.

Seldom have so many high Chinese officials and the representatives of so many foreign Powers assembled in a mixed audience as on Tuesday at the opening ceremonies of the Union Medical College.

Two Princes of the Imperial House, the Presidents and Vice-Presidents of the various Boards (of Education, War, Revenue, Foreign Affairs, etc.), with numerous other high officials of the Celestial Empire, were ranged side by side with Sir Ernest Satow, the British Minister, Mr. Rockhill, the American Minister, and many other representatives of the Diplomatic Corps, Sir Robert Hart and Sir Robert Bredon and others of the Chinese Imperial Maritime Customs, and missionaries from several Societies. All were united in wishing prosperity and success to the Medical College.

SPEECH BY THE BRITISH MINISTER, SIR ERNEST SATOW, G.C.M.G.

Several speeches were delivered, both in Chinese and English, and were listened to with the greatest possible interest. The first was by Sir Ernest Satow, some of whose remarks are appended. He said:—

We are met here to inaugurate a new Medical College and Hospital for Peking on a larger scale and with a more complete staff of professors and general equipment than has hitherto been attempted.

It was felt that if the various Missions established in the capital could unite in educational work, a university scheme of associated colleges could be realised without difficulty. This union would afford a sufficiently large staff for each college, resulting in the greatest possible efficiency with the least possible expense.

With this object in view, an association called the North China Educational Union was formed by the American Board Mission, the Loudou Mission, and the American Presbyterian Mission to give instruction in science, theology, literature, and medicine. At a later stage the "Peking University" of the American Methodist Episcopal Mission consented to the amalgamation of their medical college with that built by the London Mission, and the institution, henceforth to be known by the name "Union Medical College," represents in the medical faculty the Medical College of the North China Educational Union and of the Peking University. The Church of England Mission is also associated with this College; and it is hoped that that Mission and some others may eventually join as full members of the Union. It was agreed, moreover, that each Mission should make itself responsible for the provision of buildings and equipment for some particular part of the union work; and in accordance with this understanding the London Mission undertook to raise money and to provide buildings and equipment for the medical department of the general scheme. The building which we are opening to-day is the result.

Up to this date the cost of the building and equipment amounts to Tls. 62,660, of which Chinese subscriptions amount to Tls. 22,477.70, and of this sum, I may mention, Tls. 10,000 were the gift of the Empress-Dowager, while Tls. 10,115.20 were collected by their Excellencies Na T'ung and Chao Er-sun. Local subscriptions from foreigners resident in Peking amounted to Tls. 2,000.30, and the London Mission has contributed Tls. 38,130.

The expenditure and receipts, therefore, exactly balance each other up to the present date, but to complete the buildings and equipment required for the medical school some Tls. 14,000 (£2,000 approximately) are needed, and a further amount could usefully be spent in providing dormitory accommodation for the students.

Besides all this, it is estimated that an annual income of Tls. 20,000 will be necessary to provide for the current expenses, no part of which, I may at once state, will be used to provide salaries for the teaching staff, whose services, in so far as they are not rendered gratuitously, will be provided by the various Missions.

It is the honour and glory of the medical profession amongst us that the relief of suffering and the advancement of scientific knowledge have ever been the supreme objects with them in comparison with their own convenience or emolument.

There is lecture room and teaching accommodation for from 350 to 400 students, and the idea is to admit seventy or eighty students per annum for the five years' course.

In the hospital between forty and fifty patients can be accommodated, and another fifty can be taken in the hospital behind the out-patient department on the east side of the street.

If the present scheme proves a success, a separate hospital can be built close at hand and the whole of this building be devoted to college work. In the meantime we have rooms destined ultimately for

lecture rooms, which can for the present be utilised for dormitories for the students or for patients' wards.

The dean of the faculty, Dr. Cochrane, has received inquiries from about 200 applicants for admission, but the matriculation examination rules have been framed so as to exclude all but the very best candidates. When a commencement has once been made there can be no doubt that the numbers will increase to the full capacity of the establishment.

You may have observed, over all the other titles borne by this building, high up near the roof, in the most exalted position that could be given to it, the inscription "Lockhart College." It was felt that it was due to the founder of foreign medical missions in Peking that his name should in this manner be handed down to posterity. I had the honour of personally knowing the late Dr. Lockhart when I first resided in this city in 1862, and received many kindnesses from him.

Dr. William Lockhart came out to China in 1838 with the intention of working at Canton, but the obstacles that then existed prevented his settling there. In the following year he opened a hospital at Macao. From 1843-1857 he carried on his work as a medical missionary at Shanghai, and in September, 1861, he came to Peking where he shortly afterwards secured a house next to the British Legation. Here he carried on his beneficent labours for the next three years, when he returned to England. Dr. Lockhart retired from the staff of the London Mission in 1867 and settled in practice at Blackheath, where he died in 1896, full of days and an honour to his country.

May this building, which has been erected in his memory, continue to preserve that memory fresh among us for many generations to come.

HIS EXCELLENCY NA T'UNG'S SPEECH.

H. E. Na T'ung then addressed the meeting, Mr. Ên Hou, interpreter at the Wai Wu Pu, giving an English rendering of his speech as follows :—

It affords me great pleasure to meet you here to-day at the opening of the Union Medical College and Hospital, and, as a member of the Committee, I have the honour to extend to all present a most cordial welcome.

Her Majesty, the Empress-Dowager, who has manifested her interest in the College by graciously granting a sum of money towards its foundation, appreciates highly the efforts of all those who have been concerned in the establishment of this most useful and much needed institution ; and she has especially delegated me to be present on this auspicious occasion.

The College was planned by Dr. Thomas Cochrane, a gentleman eminent in his profession, who spared no pains in carrying through his project to a successful issue ; and the result is this well-appointed and modern College, the opening of which we have gathered together to celebrate.

That the doctor has been able to achieve this gratifying result is due, in a great measure, to the hearty co-operation accorded him by H. E. the British Minister, Sir Ernest Satow, and by Sir Robert Hart, the Inspector-General of the Imperial Customs. His Excellency the

Tartar General of Mukden, Chao Êr-sun, and many other prominent Chinese officials helped with contributions, and it is some satisfaction to me that I also was given an opportunity to render some very slight services toward such a praiseworthy cause.

It is certainly a matter of congratulation that in so short a space of time we should see this substantial building erected and ready to be opened and begin its career of usefulness. And it is my sincere hope that the College will prosper continually, and in the course of time, through the agency of its faculty and graduates, become an instrument of incalculable benefit to the Chinese and its fame spread far and wide throughout the length and breadth of the empire of China.

Mr. Rockhill, the American Minister, and Sir Robert Hart, Inspector-General of the Chinese Imperial Customs, also delivered speeches, dwelling on the great importance and significance of the forward step in medical education in China, and predicting ever-increasing opportunities of usefulness for the College.

After the speeches the visitors were invited to make a tour of inspection, and were conducted all over the building, manifesting the greatest interest in the arrangements and apparatus, etc. At the close of the proceedings tea was served in the library to the distinguished company by the ladies.

On February 19th classes commenced in the College, the first year's class consisting of forty students. Large numbers of those who sought admission were unable to pass the entrance examination, and are now preparing to sit for it a year hence.

At present the College has a faculty of eight English and American doctors, who are working in Peking as medical missionaries, and by next year it will have a faculty of twelve. In addition to this a large number of medical missionaries, not resident in Peking, have promised their services as occasional lecturers. Though the number of teachers thus available seems small, it is hitherto unparalleled in China, and gives us, and the Christian church through us, an unique opportunity. May God enable us to use it well!

Sir Robert Hart, in his speech at the opening of the College, said that in view of the pressing need for a medical department in the Chinese army, it is "only a matter of time for the College to receive regular government support," but in the meantime the upkeep and efficiency of the institution must largely depend on voluntary subscriptions.

THREE HEAD CASES.

By J. L. KERLER, M.D., Chang-li-hsien.

Case 1, to the right, age forty-two, came to us a year ago presenting the typical "frog face" of a fibroid of the nose; had been growing for eighteen years; latter years more rapidly; had pushed back into the orbits, pressing the eyes out; right eye blind, left eye about half vision; hard palate pressed downward to the level of the teeth. No use of the nasal passages for fifteen years, and two hard fibrous masses presenting at the alae nasi. Septum and turbmatids absorbed from pressure; postpharynx full, hard and tense; hearing impaired, otherwise good health; well nourished. I feared that fatal hemorrhage of which all the books are agreed, and discouraged operating, but he preferred to die rather than live and suffer longer, and he and his friends signed pledges to bear all untoward results. On incision we found only a thin membrane under the skin and no bone; incision about two and a half inches long from supra orbital ridge downward in median line exposed the monster with great difficulty and alarming hemorrhage; it was dissected out to find also that the posterior aspect of the tumor had undergone cystic degeneration, and had what seemed like a quart of cystic yellow fluid. The cavity was fully that of a good sized fist. The most careful packing failed to control the hemorrhage, which continued active for forty-eight hours, and the patient was reduced to coma; bleeding stopped, and with most careful nursing, stimulants, and the endurance of a Chinaman he made a slow but perfect recovery and was discharged in two months; nasal breathing restored, left eye returned somewhat to socket, vision greatly improved. In ten months he returned with partial loss of vision in left eye and was found to be developing a cataract; was sent home to await its maturity. I have since seen three cases, as my helper says, "same like," but neither we nor they were willing to undertake the risk; nor would I advise my fellows, who are trying to make a reputation in a new place, to take such risks, for we have since found, by a sad experience, that one death from operative treatment will do more harm than 100 cures will do good.

Case 2, age fifty-six, bone tumor from the bridge of the nose, branching out into two lobes pointing into the eyes. Vision of one eye completely obstructed, other all but the outer angle growing for thirty years, but rapidly in the last five. No pain. I decided to explore first under *cocaine* and be rather sure than sorry; on dissecting up a piece of periosteum I encountered a most frightful hemorrhage from several open-

MEN'S HOSPITAL, CHANG LI HSIEN, NORTH CHINA.



THREE HEAD CASHS.

mouthed foramen which seemed so many branches of the carotid ; was easily controlled by packing ; tried the other lobe with same result ; united the skin incisions and offered to pay his way to Peking where, with help and appliances, I believe it could be removed. He decided to pass the New Year at home and report later ; how much later you can never tell.

Case 3, a multiple fibroid of the scalp of ten years' growth ; needled and infected until it was a rotten, bleeding mass, weighing about three pounds.

PIGMENTATION OF NOSE, CHEEKS, EARS, HANDS, AND FEET.

By W. E. PLUMMER, M.D.



The patient is a carpenter, fifty-six years of age.

History :—Discolouration was first noticed two years ago in the ears ; the face was first affected a little more than twelve months since. The patient says that in the warm weather, when he feels stronger, the colour is less marked, but does not go away altogether. The ears were itchy for a short time when the pigmentation in the ears was first noticed.

Condition on admission :—The photograph did not show the pigmented areas on the face, so they have been indicated by colouring the photo with ink.

The areas marked in the photo were discoloured as if the integument had been stained with silver nitrate. The appearance of the skin on the face, apart from this pigmentation, is normal. The patient sought advice simply because of the disfigurement ; he said he had no discomfort whatever.

The hands and feet to the wrists and ankles are also discoloured, but not so markedly as the face ; the skin in this situation is dry, cracked and somewhat parchment-like in appearance. The patient says the hands and feet have a slightly numb feeling, but when gently touched he is able to locate the spot impressed.

Remarks :—The writer has only recognised about ten cases of leprosy in this neighbourhood, all of the nodular variety. He wonders if this is an early variety of the same disease.

CASE 2. MATERIAL FOR THE ANTI-FOOTBINDING SOCIETY.



This photo shows the feet of a woman who four years before had struck her right foot against a box whilst walking. As a result of this slight injury the toes became gangrenous and dropped off. At the end of four years the injured foot is much enlarged, and the skin has not yet completely covered the surface where the toes were attached.

Medical and Surgical Progress.

Medical.

MEDICAL PROGRESS DURING 1905.

A large number of original papers of high merit have emanated from American investigators, and the medical work undertaken by the government in Panama, the Philippines, and elsewhere, as in the suppression of the yellow fever outbreak at New Orleans, has afforded abundant opportunity for painstaking research by those competent to make it. The excellent bulletins now emanating from Washington and Manila show well the activities in this direction. There is a tendency for the laws of the different states to become more and more uniform, and for national laws steadily to supplant state laws. This should especially be the case in licensing to practise medicine and in the securing of divorce. While a pure food law was not passed at the meeting of Congress, it is fully expected that some relief in this direction will be secured during the present year. The *Journal of the American Medical Association* has done good work in this direction as well as in exposing secret nostrums. This journal has now reached a degree of excellence never before attained by any American medical publication. Its pages are filled with matters of diverse interest, and this very excellence has already caused a suspension of the publication of several journals and the unification of a number of others, as the *Philadelphia Medical Journal* and *Medical News* with the *New York Medical Journal*. The consolidation of the Medical Society of the State of New York and the New York State Medical Association is an important event which well

shows what may be accomplished by tact and untiring effort. The use of the United States Pharmacopœia went into effect in September, 1905. Much satisfaction has been expressed at the good work done by the Committee of Revision.

Medicine.—The important discovery by Hoffman and Schaudinn of a parasite in those suffering from syphilis has been confirmed by many independent workers. The organism was first called *Spirochæta pallida*, then *Spiroplasma pallidum*, and finally *Micro-spiroplasma pallidum*, the name by which it will probably be known in the future. No one subject has attracted more attention than that of tuberculosis. The meeting of the International Congress of Tuberculosis in Paris brought together a large number of investigators in this special field of research; the most striking features were: (1) a disavowal of Koch's dicta in regard to animal and human tuberculosis by such persons as Kossel, who at the head of a committee working at the Imperial Health Office of Berlin was commonly supposed to have been appointed to this position with the object of sustaining Koch; (2) Behring's announcement of a cure for tuberculosis, fully discussed in the November number of *Medical Notes and Queries*; and (3) the favor with which Marmorek's anti-tuberculosis serum was received. Tuberculin is again coming to the front as a mode of treatment for consumption, especially in sanatoria. At Washington, D. C., where practically one-third of the population is colored, the average death-rate in ten years for the white race

is 17.01, while for the three colored races it is 29.44 per 1,000. The figures at St. Louis are even more striking, 16.83 to 30.86. In these latter cases tuberculosis plays a prominent part. The question of the opsonic index of the blood is discussed elsewhere in this issue, and bids fair to be a distinct advancement in useful laboratory methods, especially in the study of tuberculosis. The treatment of diphtheria by antitoxin has continued to meet with success, though it is probably true that in many portions of the country the virulence of the diphtheritic infection is not as great as formerly. That typhoid inoculations may confer some protection against infection with the *Bacillus typhosus* seems to be generally believed, though its degree and duration is not yet definitely known. Cerebro-spinal meningitis has been quite prevalent both in this country and abroad, the Health Bureau of New York City having in preparation for early publication an elaborate report upon this subject. The destruction of the larvæ and nymphæ of the anopheles mosquitoes in order to get rid of malaria has not been as successful as it was at first hoped for. The methods at our command are applicable to small portions of water, but not to large bodies. Small-pox is less prevalent than several years ago. This is largely due to the increased number of vaccinations which have been performed throughout the country. It seems to be now a settled fact that no small-pox hospital should be erected or kept open in the built-up portions of cities. The sleeping sickness is now known to be due to the *Trypanosoma gambiense*, transmitted by the bite of the *Glossina palpalis*, and not by other biting flies. In this disease there is a constant lymphocytosis, and in its late stage it is always fatal. There has recently been

described a peculiar form of petechial hemorrhage which occurs in the stomach of those affected with the disease. Plague is still prevalent. The study of Malta fever has been advanced by finding that it is practically limited to Malta, and that the goats there harbor the micrococcus which causes the disease.

Surgery. — Operations which were formerly performed by but one of several surgeons in America are now undertaken generally throughout the country; in other words, the work of the specialist of to-day becomes the property of the general practitioner to-morrow, and the specialist himself is again becoming a general practitioner greatly to the benefit of his patient. The "grid-iron" method, in which the fascial and muscular fibers at the seat of the operation for appendicitis are split in the direction of the fibers, has done much to lessen subsequent hernias. A number of cases of traumatic appendicitis have been reported, as well as aneurism and tumors due to the same cause. Massage of the heart in *chloroform* poisoning has, in several instances, been used with success. Rectal etherization has been revived, and it seems that ethylchloride, in point of safety, stands midway between *ether* and *chloroform*. Scopolamine anæsthesia has already been sufficiently referred to. In operations upon the eye infection has been shown to be sometimes due to coughing or even to speaking during the use of the knife. It has been definitely shown that gonorrhœal conjunctivitis may be followed by joint infections. Serum therapy in the treatment of eye diseases has been used in some cases with advantage. Professor F. Dimmer, of Graz, has been able to secure photographs of portions of the eye-ground three times their original size and covering a field larger than the pupil. Rachlmann,

using the ultramicroscope, considers trachoma to be merely a virulent form of follicular conjunctivitis. Several observers have shown the great value of radium in the treatment of this affection.

Miscellaneous.—Marshall and Jolly believe that menstruation is not determined by ovulation but by the action of an internal secretion of the ovary (hormone), derived from the interstitial cells. Williams considers it to be of grave prognostic importance in the pernicious vomiting of pregnancy when the amount of nitrogen excreted by the urine as ammonia is definitely raised in proportion to the amount of nitrogen excreted. Schäfer considers that the red blood cells are composed of a soft, yielding, and elastic membrane enclosing a fluid. Opitz finds that alcohol increases the viscosity of the blood. Schultze has opposed the neuron theory that the fibers are processes from the cells. He considers that "each fiber is formed from many cells which he terms neuroblasts and constitute a syncytium, not by the union of separate cells but by mitotic division of nuclei and continuously preserved intercellular connection." It is now thought that adrenalin, which has been definitely demonstrated in the blood leaving the adrenal bodies, is formed from tryptophane, which in turn is a chromogen substance derived from the decomposition of albumin. Henderson has shown that castration in cattle delays atrophy of the thymus gland to a marked extent, while Paton finds that removal of the thymus in guinea pigs hastens the growth of the testes, thus establishing a close relation between these glands. An ovum fertilized previously to menstruation being stronger and more vital tends to the formation of a male child while the converse holds good in the case of the female. Ramsay has found by

using cocoanut charcoal that there is one volume of helium in 80,790 volumes of air and one volume of helium in 243,300 volumes. The bactericidal action of copper has been definitely shown, and it only remains to be demonstrated whether or not, even when employed in the small quantities necessary for this purpose, its continued use is detrimental to the human economy. Certain experiments made on a large scale would seem to show that it is. The theory of Burke that radiobes were newly generated particles of life was quickly upset by Rudge. For many other topics of interest the reader is referred to the back numbers of *Medical Notes and Queries*.

THE OPSONIC INDEX OF THE BLOOD.

Wright and Douglas shortly over a year ago called attention to a new and important property of both normal and immune sera. This consists in the preparation of bacteria for phagocytosis and is dependent upon the action of a substance which they call opsonin ("I prepare for a meal.") Rimpau and Neufeld have pointed out the presence of opsonins in antistreptococcus and antipneumococcus serum; and Lawson and Stewart in tuberculin. Hektoen and Reudiger have demonstrated that opsonins are thermolabile and are destroyed when heated to 60° C. Lawson and Stewart believe that the opsonic index will prove of great value in the treatment of tuberculosis, for the reason that daily observation of the index will enable one to avoid inoculation with tuberculin during the "negative phase." The latter, according to Wright, being the time following inoculation in which there is a distinct fall in the opsonic index. The most recent American contribution to this subject is by

Simon and Lamar (*Johns Hopkins Hospital Bulletin*, January, 1906).

Dr. David Lawson, senior physician to the Sanatorium at Banchory, Scotland, has kindly furnished us the following explanation of the method employed in his cases:—About five cubic centimeters of blood is withdrawn from a healthy person by pricking the finger. This is placed in a glass tube (A) slightly heated to facilitate clotting, then centrifugalized; this separates the serum from the clot. In a second tube (B) is placed about the same amount of blood to which is added *sodium citrate solution*, in order to prevent clotting. By centrifugalizing this there are obtained three layers, *i. e.*, serum, white corpuscles, and red corpuscles. The serum is pipetted off and the solution containing leucocytes at once becomes easily accessible. A third tube (C) contains an aqueous solution of tubercle bacilli. This is also centrifugalized in order to get a fine suspension. Equal quantities

of (A) serum of healthy person; (B) white blood corpuscles; and (C) tubercle bacilli solution are drawn from these into a capillary tube and freely mixed. They are then placed in an incubator for twenty minutes. A film is next made and stained by Zeil-Neillon process. Then count under the high power of a good microscope the exact number of bacilli found to be present in thirty consecutive multinuclear cells—call it in this case *X* and note it. The process is now repeated, substituting the blood of a patient for the blood of the healthy person, the white corpuscles and aqueous tubercle solution remaining constant in both estimations. The result obtained by counting these latter may be called *Y*; in that case the opsonic index of the patient's blood is expressed thus Y/X , which is usually a decimal. The entire process occupies about one hour and a quarter.—*Medical Notes and Queries*, Philadelphia.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

Of the various diseases which puzzle the pathologist there is none to which such attention has been called or upon which such untold labours have been expended as cancer, and so far with such unsatisfactory results. A brief review of the position as it stands now will not come amiss under the heading of these notes. It would be quite impossible in these few lines to even touch on the various theories propounded to explain the origin and activity of the cells of cancerous growths, but roughly they divide themselves into the parasitic theory and the non-parasitic theory. Two addresses have recently been delivered, from which I shall quote, as

they deal with the two theories here mentioned.

The first is by Dr. E. F. Bashford (*British Medical Journal*, December 9th, 1905), the general superintendent and director of the Imperial cancer research fund, and takes the non-parasitic view of the disease.

Dr. Bashford first proves the presence of cancer in all races, civilised and savage alike, and in large numbers of wild and tame animals, birds and fishes. And further, that the forms of cancer are the same in man and in the animals. Still further, he shows that there is the constant association of cancer with old age, both in man and in the

animal. He says: "The association of cancer with old age is the only factor known to be constantly associated and intimately bound up with the processes responsible for the development of cancer in man and animals."

Dr. Bashford then passes to the most interesting part of his subject—The limitations to transmission and its unique features. He says: "With apparent identity in the nature of a disease of such universal occurrence we were face to face with a new aspect of the old problem, Was it transmissible? Did an infective agent entering the body from without link together the sporadic cases so widely distributed in the animal scale from civilised man to marine fish living in a state of nature? The surmise was quickly arrived at that external factors such as habitat, food, and conditions of life generally played little, if any, direct part in causing a disease showing constant and unique characters in organisms so divergent. The essential factor or factors appear to be factors common to the cells of all the divergent organisms prone to the disease, and therefore the time of its appearance merely obeys the laws which set different limits to the compass of life.

To the newly-ascertained wide occurrence of the disease were also added:—

1. The knowledge of the still more astonishing limitations to its transmission, and
2. The discovery that cancer possessed powers of continued growth after the death of the original host, unparalleled either by organisms or tissues in the vertebrate kingdom.

We have obtained uncontroversial evidence that the disease is only readily transmissible from one individual to another of the same species, or even of the same race. But to this restriction under favourable circumstances there are added yet others, so that its transmission

naturally from one individual to another is a very improbable contingency. Propagation succeeds as well in young animals as in old, and perhaps better. Thus though old age is always associated with the origin of cancer, it is not a necessary condition for the growth to continue when once it has started. Within one race there is little if any evidence of idiosyncrasy or varying suitability of the soil, as it were, and experiments show that success and failure are determined almost, if not entirely, by factors within the tumour cells themselves. The facts I have been relating refer to the mouse, the only animal in which carcinoma has been successfully propagated. A mouse tumour will only grow in other mice: that of a tame mouse only well in other tame mice of the same race, that of a wild mouse only in another wild mouse of the same race. The cancer of a tame or wild Danish, German or French mouse grows with difficulty, or not at all, in the corresponding race of English mice. It has been absolutely impossible to get cells from a mouse tumour to grow in any other species of animal.

The outstanding features in the artificial transmission of cancer are therefore:—

1. The great difficulty of transmission as compared with that of the known infective diseases.
2. The continued vitality of the cancer cells as opposed to the death of the stroma cells, and renewal of the stroma by the reaction set up in the tissues of the host at each reinoculation.
3. The cells descended from any one sporadic tumour, although apparently undifferentiated, retain constant properties determining the specific nature of the stroma freshly supplied at each inoculation.
4. The importance of unsuspected subtle differences in different races of mice sufficient to determine success or failure, and, per contra, the unimportance of changes associated with age and other natural processes in

the life cycle of the individuals of any one race when once cancerous growth has started.

5. The contrasts established between the transmission of cancer and all known processes of infection.

The transference of cancer cells from one mouse to another affords them an opportunity for continuing to grow in a succession of animals. Jensen's tumour is growing to-day with undiminished energy four years after the death of the mouse in which it arose. In our experiments growth has proceeded in some 3,000 mice successively, all of which are now dead, yet the tumour cells themselves are multiplying in other mice as actively as ever, and producing enormous masses of tissue.

In describing the artificial propagation of cancer I have pointed out that it is a phenomenon unparalleled in the vertebrates and is a truer measure of the nature of the growth than that formerly known, which terminated in the death of a patient and itself ceased at that death.

Sporadically the disease arises *de novo* in each organism attacked, and appears to be a process to which the tissues of the most divergent organisms are liable in the old age period of life. The only alternative is to postulate that each species, race, and even tissue, has got its cancer or rather cancers, which are handed on from generation to generation like some family heirloom. This assumes that cancers are themselves organisms implanted from individual to individual; that they are specific to the species, and even the race, whose vitality they sap, and directly descended from some primæval cancer which started in remote geological ages. The supposition is entirely irrational, and is disproved by the fact that cancer is constantly a disease of old age, whereas old age is not necessary for the transmission and growth of cancer; there is therefore no reason why cancer,

transmitted as supposed, should not prefer youthful animals instead of being increasingly frequent as age advances.

The second address to which I shall refer is by Henry T. Butlin, F.R.C.S., and is published in the *British Medical Journal* of December 16th, 1905, under the title "Carcinoma is a Parasitic Disease."

Mr. Butlin first points out that from ancient times cancer has been regarded as a parasitic disease; first as a loathsome animal and then as a vegetable c. p. the parasitic tumours of plants and trees. Further, he reviews the resemblances between some infective tumours and malignant ones. There are again certain parasitic diseases of fish in which the tumours are almost entirely made up of myxo-sporidia, and in which the resemblance to malignant disease is so striking that it is almost impossible to believe they are not cancerous. Mr. Butlin then confesses that certainly no parasite has yet been found, but he insists that carcinoma is a parasitic disease, not in the limited sense in which the term appears to have been used of late as synonymous with infective, but in the larger and wider sense in which it used to be, and should always be, employed to express the fact of some organism living at the expense of another organism, each pursuing its otherwise separate and independent existence.

Mr. Butlin then insists on the importance of two recent discoveries, viz.:—

1. That the microscopic anatomy of continuous sections of very early carcinomatous growths of the skin does not support the theory of the derivation of carcinoma from the extension downwards of the normal processes of the epidermis. The very youngest carcinoma of the skin consists of cells which resemble in many respects the cells of the epidermis, and which may lie in contact with the processes of the epidermis, but which cannot be shown to be

derived from the cells of the epidermis. On the contrary, the cells of the carcinoma may invade the processes of the epidermis, may change their shape by pressure, and may lead to their destruction, but the cancer cells are neither transformed into normal cells, nor can they be shown to be derived from the normal cells.

2. That the growth of carcinoma depends on the growth and reproduction of its own proper cell, and does not depend on transformation of the neighbouring cells into carcinoma cells. They may be thrust aside or undermined, or atrophied, or actually destroyed, but they are not transformed. The growth of the disease is due to the multiplication of its own proper elements.

On these or other grounds which I will presently mention I shall maintain that the carcinoma cell is an independent organism like a protozoon, that it lives a life wholly independent and proper to itself, and that it lives as a parasite in the body of the animal which is affected with carcinoma, deriving its nourishment from this host and doing nothing to repay the host, for the sustenance of which it robs him. Its anatomy is the anatomy of the simplest forms of animal life.

Let us imagine a tumour wholly composed of such elements as those cells, having no other interest than their own maintenance and the reproduction of the species; tenacious of life even under very adverse circumstances; probably capable of living long periods of time where the conditions are moderately favourable, but not thriving and multiplying unless they are peculiarly favourable, even then usually not developing or multiplying very rapidly. Let us imagine that in the growth of the tumour and in the destruction which is occasioned by its growth, masses of cells are detached and carried to distant parts of the body, where they sometimes meet with conditions which are favourable to their maintenance and multiplication, or that young

cells or spores of cells gain access to the interior of the blood vessels and lymph vessels, and are caught up and carried in the circulation till they are arrested in the vessels of distant organs and tissues, where they may, or may not, meet with conditions which are favourable to their maintenance and multiplication. Let it be understood that they take no part in the maintenance and repair of the body in which they live; that they are not themselves transformed into the normal tissues of the part in which the tumour grows, nor do they transform the cells of the part into their own likeness; and that the only relation between the cells of the tumour is that the cells of the part are, so to speak, commanded to form a stroma suitable to their support and maintenance. Let us take no heed for the moment of the likeness of the cell of the tumour to the normal cells, and we have all the materials which are needed to explain almost all the phenomena of carcinoma with which we are acquainted. We can understand not only why these secondary growths occur, but, in a manner, why they fail to occur. The conditions are not favourable to the activity and multiplication of the cell. And bearing in mind the tenacity of life with which the cell is endowed, we may assume that though the conditions are not for the moment favourable to the active life of the cell, they are yet not so unfavourable as to destroy its vitality, and that it may lie dormant in the parts to which it has gained access during long periods of time until the conditions become more favorable, when it assumes its activity and multiplies as if it still formed part of the original tumour.

More than once I have seen carcinoma thus lighted up in glands long after it ought naturally to have occurred, and just when we were

beginning to hope that all danger was at an end; once by exposure of the side of the neck to a cold draught during several hours, and more than once by an attack of inflammation of a salivary gland within or in the immediate neighbourhood of which the lymphatic glands were placed.

And in the same way we can understand the rise and fall in the tide of carcinoma, how the tumours are at one time smaller and again larger and more active, how indeed the patient may seem to have been cured, but the case has been delusive, due to lowered vitality of the parasite or to raised resistance of the tissues of the host, and to this greater resistance we must attribute the happy results of those treatments, such as removal of the ovaries, or the administration of such remedies as thyroid extract, which have occasionally achieved a success which has raised the wildest hopes in the minds of patients and their medical men.

Mr. Butlin then goes on to point out that if cancer is a parasitic disease it ought to be able to satisfy certain conditions, viz.:—

It should present the same or similar characters in every part of the host in which it occurs.

It should be transmissible from one part to another of the same host.

It should be transmissible from one host to another host under certain conditions.

It should be capable of living outside the body of the host.

Cancer certainly fulfils the first three conditions. With regard to the fourth Mr. Butlin says:—Hitherto I believe that all experiments which have been made with the object of cultivating the carcinoma

cell outside the body of the host have resulted in failure, and this has been regarded as strong evidence against the parasitic theory. Even if it be admitted, it is not a serious obstacle to the acceptance of the theory, for there are other parasitic organisms which are believed to be unable to exist outside the body of the host. In Balland and Shallock's experiments on the inoculation and cultivation of psorosperms from the livers of rabbits, they not only failed in every attempt to inoculate the parasite, but only succeeded in keeping it alive in tube by preparing the tubes with rabbit-blood serum. Even then the authors thought there was no evidence that the psorosperms multiplied. Yet these are organisms of the nature and independence of which no doubt exists. Thus the carcinoma cell satisfies what is required of it so far that it presents the same or similar characters in every part of the body of the host in which it occurs. It is transmissible from one part to another of the same host. It is transmissible under certain conditions from one host to another host. It will live outside of the body of the host for many days, and at the end of many days, if it be placed in favourable conditions, it will thrive and multiply as if it had never left the body of the host.

Mr. Butlin then reviews the question of the origin of the parasite, brought from without or arising *de novo* in the body itself and the principal objections to the parasite theory, but for these we must refer our readers to the original article, which will well repay a very careful perusal.

The China Medical Missionary Journal.

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MAY, 1906.

No. 3.

Editorial.

Another appeal which shall be quoted brings forcibly to mind, if any force was necessary, our lack of cohesion as a working medical body. Dr. Philip S. Evans writes us from Yangchow under the date of March 6th as follows : " For some months now I have been trying to get a trained assistant, without success. I have had word sent to me of certain cases, but the word reached me too late. Would it be possible for you to start a small department in the JOURNAL to acquaint some of us of the whereabouts of recent graduates who are looking for places ? When I first started I met several such young men, but had no money to pay their salaries. Now that I have the money I cannot find the men. Won't you help me ? "

The JOURNAL will certainly be glad to keep a directory of such men if they or their foreign instructors will be good enough to send their names and addresses to us.

There are doubtless other incidents of exactly this kind where through lack of co-operation men fail to get places and the places fail to get the needed men.

From various sources the information which filters into the sanctum would indicate that at the present time the demand for trained assistants is decidedly in excess of the supply. Up to the present time there have been very few medical schools that had in training more men than they could use ; but the tide has turned, and we hope the time is not far distant when every man who needs a hospital assistant will not be under the necessity of training him himself.

It is here, we trust, that our larger medical centres for education will be of use, and yet we must face the economic fact of the increased cost of living and be prepared to pay fair salaries if we expect to hold many of our young assistants to mission hospital

work, when the government service, as well as private practice, offer to a clever well-trained young native much more substantial returns. Under these circumstances nothing hut the real Christian spirit of devotion to the service of God's suffering children will call him to his post or hold him there.

TO THE ASSOCIATION.

With this issue of the JOURNAL the secretary lays down the "white man's burden" to go home on furlough. His duties as secretary and treasurer will be taken over by Dr. Davenport of the London Mission, Shantung Road, Shanghai, to whom all general letters should be addressed. Returns of statistics, hospital reports and all communications or matter for the JOURNAL should be addressed to Dr. W. H. Jefferys, 4B Minghong Road, Shanghai, who will have the Herculean task of keeping the JOURNAL going for the remainder of the year or to our next general meeting.

The secretary wishes to state here and publicly that the only reason he was able to bring out so creditable a JOURNAL in 1905, during his colleague's absence, was the excellent collection of articles which was accumulated at the last general meeting and the continued faithful and valuable assistance of the editors of the department of Medical and Surgical Progress. The supply is now exhausted, and we have again moved into Poverty Row, and it is nearly a year until the next general meeting. I know my colleague is a wonderful man, but neither he nor any other one man can edit a proper medical journal without regular assistance of the right sort and cheerfully rendered; and I entreat you, as you value the good name of your Association and its official organ, to do better by us in the future. With the present support it will be utterly impossible to continue the JOURNAL as a bi-monthly.

The secretary has received a number of corrections to the list of members as published in March, which he gratefully acknowledges. He is keeping a careful note of the corrections, and it is to be hoped that a revised list may be reprinted after the meeting of 1907, as the cost is not great. In the meantime do not fail to send in any corrections or additions that you may know of.

The secretary has tried to keep in closer touch with the members of the Association and has had some degree of success in so doing. It seems to him that the present method of electing members to the Association is a somewhat tedious one and to a certain extent a farce, as so few of the members take any notice of the voting lists. Yet he hesitates to suggest another method for two reasons: in the first place because he has not yet evolved a better plan, and in the next place because it helps him to keep in touch with members of the Association from whom he would not otherwise hear. So while it is far from a perfect method we had better retain it unless some member with a fertile brain can evolve a better one.

There are many ways in which the Association might be much more of a power for good in the land than it actually is. At present our greatest needs as a body, at least from the secretary's point of view, are enthusiasm, cohesion and co-operation, which he would put in the form of a golden text for 1906—Sit tight, hold tight and write.

THE STATISTICS FOR 1905.

In response to demand for statistics thirty-two hospitals have courteously been reported so far against a total of forty-six last year, which leads us to hope that the number reporting this year may be even larger than last. Several of those reporting suggest that if the wish is to get at the total number of anæsthesias the arrangement of the questions should be altered. At least a rearrangement of the wording of the questions would undoubtedly settle the uncertainty which now exists as to just what is asked for. Another very proper suggestion is that there should be more room on the blank for the figures.

NATIVE METHODS OF MEDICAL PRACTICE.

To those of us who do not live very far inland, it seems likely that before a great many years have passed by the old native practice of medicine will have died of senile atrophy. The thing has already happened in Japan, and so it will sooner or later in China. Yet there has never been made, so far as we know, a

complete study of the old native practice with the view of preserving its folklore, its facts of historic interest, and of making sure that it has nothing of real value to give to scientific medicine. The address on this subject, which we print in this issue, does not pretend to be such a study as we mean. It was delivered before a large layman's club and for the purpose of stimulating a keener sense of responsibility in the minds of those who live in the great light. In reproducing it for professional readers in China our purpose is to develop an interest in the subject rather than in the address, to show something of what we do know (which is incomplete) and to point the way for further work. The author of the paper has already gathered a considerable number of native surgical instruments, native drugs and some data on methods, etc., mostly, however, from the province of Kiangsu. Such things are not easily acquired, but they may be. Each one of us in the natural course of events comes across some of them. They are of immense interest if they can be grouped and classified, and some of us will find such work a fascinating study. If you do not personally care to give the time or attention to the subject, do let others have the benefit of your good fortune. The author of the paper would be overjoyed to receive any such data or specimens from any part of China or the East, to pay postage or other moderate charges, and to promise to use the same "data or specimens" to the best advantage. He will also be very happy to show his collection to any physician who happens to pass through Shanghai and cares to see it.

PUBLICATION FUND.

Contributed for the purpose of publishing medical text-books and other literature in the Chinese language useful to the advancement of medical education; to be used under the control of the Publication Committee of the Medical Missionary Association of China:—

Previously reported	...	...	...	...	\$2,832.48
Medical Missionary Auxiliary, Baptist Missionary and					
Zenana Societies, London, £7 10s...	...	...	...	...	70.90
Mr. Chang Hwa-tseu, Luchow-fu	...	...	...	...	20.00
Dr. O. T. Logan, Changteh, Hunan	...	...	...	...	10.00
					<hr/>
					Total \$2,933.38

Book Review.

THE WORLD'S ANATOMISTS, by G. W. H. Kemper, M.D., published by P. Blakeston's Son & Co., Philadelphia.

This neat little pocket edition, with rather a formidable title, is a collection of a series of biographical sketches originally published in the *Medical Book News* in 1904, which are now reprinted in a neat little volume, bound in stiff paper cover, about the size of a Mulford Price List.

It contains brief biographies of some two hundred and twenty-nine men who have rendered service to medical science in the subject of anatomy. It also contains nine reproductions of portraits of famous anatomists or authors on anatomy, and two plates—one of Rembrandt's celebrated painting, the *Demonstration in Anatomy*, and a reproduction of a drawing of the circulatory system, which was the frontispiece in Vesalius' *Anatomy* published in 1542, which, viewed in the light of our modern knowledge, makes us smile.

The biographies contain a great deal of valuable information in what might almost be called compressed tablet form, and it is a little volume which will be of interest and profit to every true lover of our profession.

The price of the booklet is not stated, but it is probably on the fractional side of the dollar, and as a work of reference it is certainly worth much more than that.

C. S. F. L.

Hospital Reports.

To the Editors of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

I enclose a brief report of the medical work of the A. P. M. at Ichow-fu, Shantung, for the year 1905.

In many respects it has been the most satisfactory year since the organization of the work fifteen years ago.

In point of numbers it has far exceeded any previous year. The total number of patients has been twenty-four thousand two hundred and seventy (24,270) as against seventeen thousand five hundred and forty-eight (17,548) for last year, and against twenty thousand four hundred and one (20,401) for the highest year before the "Boxer outbreak."

Of these patients 18,510 were in the men's dispensary and hospital and 5,760 in the women's. Of the total number 13,550 were first visits and 10,720 return visits. Hospital patients this year (included in the above total) have been 340; of these 135 were in the women's hospital and 205 in the men's. Hospital patients are recorded but once. The daily treatments given them are not included in the "return visits." Dispensary patients are given from four to eight days' medicine when it is possible to do so.

Over 200 surgical operations have been performed; forty of them under a general anæsthetic. Sixteen cataract operations have been performed. Good vision was secured in most of these cases. Two, however, were only partially successful and one was a complete failure. In this case there was nothing about the appearance of the eye previous to the

operation which would lead one to suspect any departure from the normal. The instant, however, that the incision was made in the corner the lens popped out, bringing with it quite a portion of the vitreous, and although the eye healed without any inflammation to speak of, the sight was completely lost.

Preaching has been carried on regularly in both men's and women's dispensaries and in the hospital wards, and much interest has been manifested by the patients.

The hospital evangelist has followed up these impressions by visiting the patients in their homes, and several new centres of interest have in this way been started.

The medical class finished its course this year. It began in the autumn of 1899 as a class of fifteen, but was interrupted by the troubles of 1900 and 1901. Eleven of them, however, began work again in the spring of 1902 and continued steadily at work up to the present Chinese New Year. Of this time three years were spent here and one year with Dr. J. B. Neal at Chi-nan-fu.

They have worked about eight months in each year and have completed anatomy, physiology, materia medica, therapeutics, chemistry, eye diseases, skin diseases, theory and practice of medicine, principles and practice of surgery and hygiene, together with something of obstetrics and gynecology.

They attended clinics in the dispensary and hospital during the last two years of their course and are expected to do a year's further work in some hospital before receiving a diploma. Seven of them have been engaged as assistants in the hospitals of our own mission in the province. One goes to Pao-

ting-fu, Chihli province; one to Hsü-chow-fu, Kiangsu province; and two to Hwai-yuen, Ngau-hwui province.

The members of this class have paid all their own expenses during the whole course, with the exception of the year they were in Chi-nan-fu. As living expenses are much higher there than here they were assisted that year to the extent of 1,000 cash each per month and 5,000 cash each toward their travelling expenses. This sum, which amounted in the aggregate to about \$100.00 gold, was a special gift for this purpose, contributed by Mr. Earl D. Stilson, of Jamestown, New York. The class, as well as the writer, wish to publicly acknowledge their indebtedness to Mr. Stilson for his generous gift, as without this assistance it would have been impossible for them to have taken the year's work with Dr. Neal in Chi-nan-fu.

Another very timely gift was \$50.00 gold from the First Church of Pasadena, California. This enabled us to present the class with the text-books they had used during their course. These books had been loaned them with the understanding that they were to be paid for or returned. As most of the boys were poor and had only, by the most rigid economy, been able to finish their course, it gave us great pleasure to be able through the generosity of this church to present them with their books. The church, too, I am sure, would have been equally pleased had they witnessed the gratitude of the boys when the announcement was made to them.

This is probably the last medical class which will be taught independently by any one individual in either the English Baptist or any Presbyterian Missions of this province. Future classes will be under the control of a Union Medical Committee of these two missions.

In October Dr. Emma E. Fleming, who has charge of the women's dispensary and hospital here, left for her furlough home. Since that date her work has nominally been in charge of the writer, although practically the well-trained corps of assistants which the doctor left in the hospital has done the work, with the exception of now and then a more than usually serious case.

We would close this report with devout thanksgiving to God for the blessings received and the privileges enjoyed this year and a prayer that they may continue with us throughout the year to come.

CHAS. F. JOHNSON, M.D.

ICHOW-FU, March 20, 1906.

It is with feelings of gratitude to God that one is able to commence this report of the year's *Eng-chhun Hospital* doings. For not only has the hospital been again reopened, but the new hospital, which was so much needed, is now well on the way. The hospital was commenced on the 21st of February in this year, and so has been open only some six months out of the twelve, and owing to the rebuilding both patients and workers have had to put up with no little discomfort. For instance, it is not pleasant to operate in a theatre where the floor is so rotten that in an operation involving any delicate work no one can be allowed to move about. Neither is it at all ideal for one's severe abdominal sections to have to spend the first few days under the cover of an umbrella because the old roof leaks like a sieve. God's goodness has been very manifest to us in this respect. In spite of a very large number of serious surgical cases there has been no death after operation to record.

On the other hand, I have never known such a run of serious operation cases, and the way in which

women have put themselves in the hands of a new-comer has been quite remarkable. Of course I was not new to the dialect, and some few in the region knew me before I came; still this does not account for all, and although some of it may be reasonably attributed to the work of my predecessor, yet there is no doubt that the women of this region are much more free in their intercourse with men than in my old station in the south. Fortunately plague this year was not very severe, although the cases were of a grave type. One case occurred in a missionary, hut it was happily of a light type.

In all some 500 in-patients have been treated in the hospital, and owing to the rebuilding I have been compelled to turn away many who would have liked to have stayed in, hut whose affections were not of a very serious type and for whom I had no room.

One of the features of this year's work has been the large number of men coming to try and get rid of the opium curse, and although there has been failure in some cases, and the relapse in others, on the whole the work has been very encouraging, and I have reason to believe that in five or six cases at least real interest in the Gospel message has been awakened. Those of whom I speak are coming to church regularly, and I have great hopes that ere long we may be able to admit some of them to membership. I always impress upon them that there is only one sure and certain way of breaking the habit and not recommencing, and this is to get into touch with the Lord Jesus Christ. The work has great difficulties, and one of them is the want of proper accommodation where they can be looked up if necessary till the craving is over. The worst of the craving lasts only about four days, and the majority

of my successful cases are those who have been looked up in this way. As patients in the general wards there are far too many facilities of getting secret supplies of the drug.

While there is much to disappoint one in the indifference of many of the patients to the message of life yet one has one's encouragements. The second hospital cook has just been admitted to the church, and one at least of the hospital coolies will not be long after him. I also know of one or two of the hospital patients who have never missed a Sunday service since they left the hospital.

As for my helpers I have to acknowledge with thankfulness that I am well favoured. We feed our patients entirely, and they pay a fixed sum daily for the same, and in this way the hospital can be kept much more clean. Mrs. Maxwell takes charge of the kitchen, oversees the collection of the money by the students, and makes it pay its way well. She also takes charge of the operating theatre for me, and has been a most efficient helper in this matter. I have also to acknowledge with hearty thanks the help given by my ministerial colleague, Rev. H. Moncrieff. Whenever he has been at home in Eng-chhun he has never failed to take one of the two weekly out-patient services, and the native pastor has very often taken the other, so that I have had most efficient help, and in this respect the connection between the two sides of the mission work has been most happily manifested. Besides this work the hospital preacher has spent a good deal of time in the wards, and the same may be said of a blind boy who, under Mr. Moncrieff's and my superintendence, has spent a part of each morning in the wards.

This year has also seen the commencement of the rebuilding of the

hospital. In the new plan there are four main blocks, and I hope that by the end of 1906 we shall see the roofs on three of these, and that they will be ready for occupation by next autumn. At present the patients are sleeping like sardines anywhere and everywhere, and the old chapel is often pretty packed at night. In this place they sleep on boards placed across the forms. The women are specially badly off just now, their place being little better than a hovel.

MEDICAL.

Of the year's work as regards medical cases there is not much to say. One has fortunately been spared the epidemic form of plague, and although the cases seen were mostly of severe type yet the total number of cases were comparatively small. Being mostly severe cases the mortality was very high. *Carbolic acid* was freely given, but without any specially noticeable results. One case occurred in the sixth month of pregnancy. Miscarriage took place on the fifth day and death on the eighth day respectively.

A large number of cases (eighty-three) have been admitted for the cure of opium or morphia. Of these some fifty-four succeeded in the attempt, and although many of these have again relapsed, a fair number are standing well. I always break off the whole amount at once, and with the patients' permission put them under lock and key for the first five days. They are then, with very few exceptions, free of the craving. I like them to stay in hospital twenty-one days, and this certainly saves some from an immediate relapse. The morphia cases are by far the worst.

Nearly all of them got bad vomiting, and in one case I had a great difficulty in stopping it. In one case I was compelled to administer

opium and then gradually diminish it. The patient was an old man, and his pulse became so poor and irregular, and he had so severe an attack of tetany that I thought he was going to die. A small dose of *tinct. opii* produced an almost immediate improvement in his condition.

But one needs to live with eyes and ears open when one deals with these cases. At one time I had four men, all friends, in for the cure of morphia. They were locked up, but they did not seem to be suffering from the crave as they ought to have done. At last I found out the trick. They had adulterated the medicine I was giving them with morphia, and of course they had no crave, and what was worse they were being supplied with the drug by another man in for the cure of opium, who had himself got over the crave and thought to turn an honest (!) penny in this way. Needless to say the atmosphere was rather breezy for a time. One death has taken place in the hospital. A man who was a confirmed opium smoker had a fall from a ladder, and was brought in suffering from shock, pain in the abdomen, and opium crave. He got gradually better and went out after three days. I could find nothing definitely wrong in the abdomen, although he was still complaining. He came back in fourteen days' time still complaining, with a high temperature, and I again took him in, because he had no proper home, and isolated him. *Quinine* had very little effect in reducing the temperature, and he slowly failed and died next day. One of the cases on which one wishes one could have a *post-mortem* examination.

Of abdominal operations there has been an excision of bowel, two ovarian tumours removed, one bad case of hernia, complicated by a large inflamed hæmatocœle, in which I

removed the whole testicle and tunica vaginalis and performed a radical cure of the hernia. The testicle was much atrophied and the parts matted, making the separation of the hernial sac a matter of no little difficulty. One case of stone in the bladder has been operated upon by the suprapubic route, but I fear that this case will not be much of a success, as there is no doubt that both lungs and kidneys are the seat of serious tubercular disease.

A large urethral calculus which had lain some time in the penile urethra was removed, two cases of syphilitic hernia testis have been treated by shaving off the prolapsed portion, and several cases of stricture have been attended to by either external urethrotomy or forcible dilation under an anesthetic.

One of the features of the year's work has been the number of new growths which have come under treatment. Certainly there is no lack of malignant disease in this region.

In the eye work the noticeable point has been the number of juvenile cataracts coming in for operation. The plan of operation which in my hands has suited these cases the best, is that of a very free needling, waiting for a few minutes and then extracting in the following way:—A triangular knife is passed into the anterior chamber, the whole incision lying well within the cornea. This is then depressed, and the soft lens material and aqueous fluid runs out anterior to the blade of the knife, which effectually prevents any prolapse of the iris. A little lens material may be left behind, but this is mostly absorbed under atropine.

One case of senile cataract proved a failure from sepsis. This supervened on the fourth day and was not very severe, but it was enough to destroy the sight of the eye. All

the other cases on that day did well, and this patient's other eye, which I had previously done, had done well. He had a chronic nasal discharge, and infection may have taken place via the nasal duct.

In the obstetric work there is little to note. As before the great majority of obstructed labours have been due to unreduced occipito posterior presentations. One case of retroflexion and impaction of the gravid uterus was treated in hospital, and gave me a lot of trouble, as I had to replace the uterus three times under *chloroform* before I could get it to keep up.

One of the unpleasant features of the work has been the amount of male and female syphilis with which one has to deal. One city, not far from here, has the reputation of not having one pure woman within its walls, and although this is no doubt an exaggeration, it has been fully borne out by the cases which have come to hospital from this place.

For the first time in the history of the Eng-chun centre the whole of the local expenses have been met by the small fees which have been charged to each patient, and the donations of friends, and the profit from the kitchen account; and we hope that next year, besides doing this, we may be able to pay a part, if not the whole, of the drug supplies from home. Next year, too, we shall not have the initial expenses of re-opening.

J. PRESTON MAXWELL.

First a word about Ch'ang-li, one of the most beautifully situated

Ch'ang-li mission stations
Medical Work. in North China. Twenty minutes to the north are the "everlasting hills," ever reminding us of God's greater strength and presence. To the east, west, and for ten miles southward to the seashore, a level, fertile country, densely populated

by an intelligent, kindly-disposed people. Only ten minutes from the railway station, five minutes from the city, land high and dry, good water, sea breezes, fruit in season and out of season—certainly this is a good place to save the souls and bodies and minds of men.

Of the large compound, the hospital enjoys the place of special advantage, nearest the city, on a triangular neck of land, the apex of which looks out into four streets of the east suburb. Here is the hospital gate, over which are the characters, carved in stone, "Kwang Chi I Yuan," the name of the old hospital at Tsun-hua, and which being interpreted mean, "The Large Extensive Healing Institution."

During the year we have moved four times, beginning with a small hallway about ten by ten, a part of the doctor's residence. From there to a gatehouse; later to a larger one; and in the early fall to a Chinese house in the present hospital court, where, with a few other old houses, repaired for helpers' quarters and wards, we have existed until now. Our next move will be into a large, clean, commodious, convenient, new hospital. Praise the Lord!

The new building consists of a two-storey centre, with basement, waiting-room, chapel, and surgical ward adjoining. The hospital proper has a furnace room, coal room, and dark storage room in the basement. First floor: dispensary, laboratory and drug room, operating room, private consulting room, and dark room. Second floor: three large wards, one small one, and store-room.

Neither time nor space would permit a detailed account of interesting cases. A few must represent them all:—

In the early fall came a poor sufferer, much deformed with spinal disease, paralyzed in the lower ex-

tremities. His lightening-like pains had been increased four hundred per cent. by four hundred punctures with Chinese needles along the spine and thighs. We relieved his distress somewhat, made him a pair of crutches, and he at once became an earnest, intelligent seeker. Mr. Ch'en, speaking of him, said: "He very love our God, and wish narrate his name on the church."

In less than a month this raw heathen, as we sometimes call them, was soundly converted, and went to one of our men's training schools to learn more about Jesus and His Word. He has returned to his heathen village; and at last report was preaching the Gospel and selling hooks with much success. Pray for him.

Another, a hoy with an unsightly hare-lip and cleft palate, was so improved by an operation that his parents were at once able to purchase him a wife. Soon three others came from the same neighborhood, about fifty miles distant, and said there were yet others who would come if we cured them. Not till we put a price of five dollars on the job did the hare-lip trade fail.

Another great strong man, a mason, an invalid for three years, with necrosis of the skull, and abscesses poisoned with Chinese needles, was restored to perfect health and to his occupation in three months; and has since been a faithful advocate of foreign doctors and their doctrine.

It is to the patients that live in our wards for a time that we look for results; and they have been certainly very gratifying. Thank God! Hereafter we may expect and attempt greater things, having better facilities for operative work and larger accommodations. God is also raising up friends for us among the Chinese. One rich man has sent us upwards of one hundred

patients; one, a bad shooting accident requiring amputation, for which he sent us five dollars and paid his expenses while at the hospital.

We are well aware that unless the Chinese come to our help, rather to their own help, the home friends and society can never keep pace with the financial demands of our rapidly-increasing and far-spreading work. We are considering ways and means by which to present the advantages and claims of such an institution to them.

Our future looks bright and promising. Surely a great and effectual door of opportunity has been opened to us. The Lord give us eyes to see, and hearts to feel, and heads to plan, and hands to do!

J. L. KEELER.

Another year has passed with its opportunities for service. Many of

*Peking
Medical Work.*

these have been improved, and we can look back on a year busy with many duties. Much earnest work has been done and witness borne for the Master. We cannot but think with regret that any opportunity was allowed to pass unimproved. The influence and reputation of the work has been extended during the year, and critical cases have come to us from the city and from the distance for treatment. The dispensaries are well patronized and many needy people have been helped, but we feel that our work is not yet filling the place as an evangelistic agent that it should. This is mostly due to the fact that the work of reconstruction of our Mission plant has drawn heavily on our medical force. Whether this has been a wise expenditure of time is in our minds a doubtful question, but the necessities of the case seem to demand it of us to the detriment of the regular work.

This will, however, soon be finished and our future lines of work must be considered and selected. The medical dispensary as a charitable institution is not as necessary in Peking as it was a few years ago. There are many free dispensaries opened by the government and the military in this city. These could, in a way, take care of those needing attention. We believe that this city and surrounding country needs such a Christian institution as we will be able to build up here. We will need to take up the work as missionary physicians reaching out beyond the city to our country stations and the new work that is opening. This was our plan formerly, but the conditions of the past few years have made such work impossible.

With a view to limiting our expenses and relieving the Mission as far as possible from the financial burden of the medical work, we have been making charges for the medicines and services, carefully discriminating that those who have a just call on our charity may not be deprived of it. The number of patients treated has been a good deal reduced by this system of charges, but we believe we are treating a more appreciative class.

The Southern City Dispensary was opened for work in its new building in October of last year. This has proven to be a good location, and the results have been exceedingly satisfactory. We believe that here will be a very important part of our work in Peking. The chapel work in connection with it has been interesting. The room has been crowded every day and opening the doors insures a good congregation.

The medical school of the Peking University has had its home with us during the year, and a part of our duties has been in connection with it. This school has received

support from the other Missions in its teaching staff and students sent. The coming year this help will be withdrawn, as these Missions have formed a Union Medical School. An invitation has been extended us to enter this Union in medical education, and we hope that it can be arranged that this new school can be made the Union School of the Peking University and the North China Educational Union of which it is now a part. There can be no more important work coming to the foreign physician than that of giving a knowledge of medicine to the Christian men of this nation and no one should be as competent to do this work as the medical missionary.

Another part of our work has been the care of the boys in the University. The general health of the school has been better than in years past. This has been due, to a great extent, to military drill and other out-door sports that have been introduced. With the new plant now in process of erection the University will be able to supply more sanitary surroundings, and with careful supervision we do not see why these boys should not complete their course with vigorous bodies or why so many should break down during the college course.

We will take up the work of another year with fresh courage, feeling sure that faith, hope and very much charity put into our service for the Master will and is being rewarded in the lives of many of this people.

N. S. HOPKINS.

G. D. LOWRY.

The annual meeting of the Canton Medical Missionary Society has just been held.

Medical Missions in Canton. The printed report indicates

that its influence is widening and that it has not even yet reached

the zenith of its usefulness. Many thousands of sick and sorrowing Chinese have sought and obtained assistance during the year. More than ten thousand dollars from natives have been received through various channels into the funds of the hospital. The main sources of income are visits paid to out-patients, medicines sold in the hospital, and rents from rooms which have been let to those who wish to reside for a while under the direct supervision of the doctors in charge. In addition to this more than a thousand dollars have been received as fees from medical students who have been in residence during the year. These sums of money indicate a new era in the history of medical missions, and one which will enable those who control them to enter upon a yet wider field of usefulness than has yet been occupied. If the benevolent in Christian lands were to be relied upon to supply all the funds, the areas benefited must in the nature of things be circumscribed, but as the Chinese are beginning to assist themselves there is no limit to development, except the supply of whole-hearted and devoted men, and it is not likely that this supply will fail. The time apparently is approaching when nothing further than the salaries of the doctors will have to come from outside sources, and then with a larger staff of well-trained native assistants there is no limit to the possibilities of efficient work. The influence of the boycott has been felt. The depth of this anti-American feeling may be gauged and understood when it is said that even the sick have refused to apply to American doctors, and this appears to have been the case during the latter half of the year. Towards the end of the year, however, this antagonism appears to have weakened, and it is to be hoped that in this regard the

Chinese will not be foolish enough to cut off the nose to spite the face. It is expected that during the coming year Dr. Swan will return and assume control of the work, which has been greatly developed under his energy and progressive ideas. Moreover, the fees paid by youths for efficient medical training in Western medicine show that the Chinese themselves are alive to the possibilities of the medical profession as an opening for their sons, and though doubtless they do not seek this training in order to give themselves to philanthropic work, as the doctors do who have come from the West, they will in time become a blessing to their fellow-countrymen and will be able to relieve a vast amount of suffering, in the face of which the native practitioners stand quite helpless.—*North-China Daily News.*

The Huchow Baptist Hospital has nothing of special interest to report. We have pulled through the year some way, and hope good has been done in the name of Him who taught us to love and serve others.

Our colleague (the evangelist) being away home on furlough I have had to look after his evangelistic work and the medical work also. It goes without saying that neither were done well. But despite this fact the work has gone on

growing. We have had more hospital patients than before and more dispensary patients also. The income from the sale of drugs has greatly increased, and I hope it will never be as before when we had to give away practically all the drugs we prescribed.

In our work there are some encouraging signs. One is the people are showing a willingness to pay for what they get. Another is, they are believing more in the foreigner and his manner of treating diseases. This is very perceptible in the number of people who are willing to submit to surgical operations. This last year the number of surgical operations was about double what it was the year before.

There are some discouraging things also in our work. One is there are so many ulcers that I cannot cure. I acknowledge my failure in this, hoping that some one will give me some light as to how to do it. An ulcer on the shin is a horror to me. I have failed on so many. Other places I can get to heal, but these old ulcers are too much for me.

The spiritual results are not what we could wish, yet we have seen some turn to the Lord, and there are others that we feel have received impressions that they will not forget. The leaven is at work, and it will continue till the whole of China will be leavened. The light must and will drive out the darkness.

M. D. EUBANK.

Correspondence.

HOSPITAL PLANS.

To the Editors of

"THE CHINA MEDICAL MISSION-ARY JOURNAL."

DEAR SIRs: During the last few weeks the writer has been working over a set of plans for a proposed hospital and has received great assistance from the several sets of plans already published in the JOURNAL. He believes it would be wise to continue their publication with considerable frequency and would like to make one suggestion, namely, that they always be reproduced on some given scale, either of $\frac{1}{4}$ inch to the foot, $\frac{1}{8}$ inch to the foot or $\frac{1}{16}$ inch to the foot. By so doing their helpfulness would be greatly increased, as the user can in a moment obtain any desired dimension by the use of a ruler. The three scales above mentioned are the most convenient ones as being most easily used with an ordinary ruler.

Our thanks are due to all those who have worked before us in this task of drawing up plans and then have taken the trouble to publish the work for our benefit.

Very truly yours,

SAMUEL COCHRAN.

HWAI-YUEN, March 28th, 1906.

THE RECENT RIOTS AT CHANGPU,
S. FUHKIEN.

For a long time past, say six to eight years at the least, it has been notorious that there has been a branch of the Triad and also of other secret societies in the Chauan-Unsio-Changpu region.

During the last six months these societies have been more active and

have been preparing for trouble, giving out ji written on small pieces of paper which were to be made into a decoction and swallowed by the recipient in order to make him bullet proof.

It is said that a rising was fixed for the third month of this year, but was precipitated by the foolish action of a Roman Catholic priest at a place some five miles from Changpu.

On one of the early days of February this man, for some reason or other, seized two of the secret society men and confined them in his chapel. Their fellows rose, sacked the chapel, released the men, and the priest had to fly disguised as a coolie. The rioters then made their way to Changpu. Some of them attacked the chapel on Monday, February 5th, but learning that it was a Protestant chapel desisted. Meanwhile the mandarin sent for soldiers to Unsio. On the Tuesday morning, about 9 a.m., a band of rioters burst into the city and made for the mission buildings. Fortunately all the missionaries but one were out of the city and the schools and hospitals were closed. The one there, Rev. H. W. Oldham, escaped over a wall with the native pastor and hid in a heathen house till night, when they were rescued by the mandarin, who had been informed of their whereabouts by one of the Christians.

Meanwhile the buildings were sacked and some of them burnt. At about 1 p.m. the mandarin got soldiers from Unsio and sent them to attack the rioters, who were mostly unarmed (as regards guns). They fired on them, killed four and wounded about twenty to thirty, of whom several have since died.

They also seized some, and of these nine at least were beheaded straight away at the yamên. Fearing further trouble the mandarin withdrew the soldiers to the yamên and the roughs of the city continued the looting. Fortunately next day there was heavy rain, and the following day large reinforcements of troops arrived.

Since that date one of the heads of the societies in that region has been seized, sent to Changchew and there beheaded. As to the damage done:—

The hospital chapel and a large block containing the dispensary, etc., are burnt and absolutely wrecked. The remaining portions of the two hospitals are wrecked, everything moveable and also the doors and windows carried off.

A large double house which served for the two doctors (bungalow style) is burnt and absolutely destroyed.

Two other large European dwelling-houses are wrecked, everything moveable carried off and windows and doors gone.

Everything the missionaries possessed is gone. The boys' school

is wrecked and one block burnt. The pastor's house, church, girls' and women's schools and the inn are all wrecked, and all doors, windows, etc., carried away. All these are fine two-story buildings, save the one which is in usual Chinese style. A large Chinese house, occupied by three Christian families, is burnt and all their goods taken. The pastor and some of the neighbouring Christians also lost all their goods.

There does not seem to have been any determined attempt to take life, and the Christians were all untouched, but it is said that some search was made for the party of foreigners then on their way up from Amoy. They were fortunately turned back about twelve miles from Changpu, and although deserted by bearers and carriers, managed by walking and getting a boat to get down to the river at Koagim, whence it is easy to get to Amoy. They had a very hard time of it, Dr. Montgomery pushing the boat, wading in the water for about three hours. All the party were much exhausted.

J. PRESTON MAXWELL.



LOCKHART MEMORIAL. UNION MEDICAL COLLEGE, PEKING.

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[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

QUININ IN CHOLERA.

[I quote the following from the *Journal of the American Medical Association* hoping that it may prove of interest and profit to the readers of the MEDICAL MISSIONARY JOURNAL.

W. H. VENABLE, M.D., Kashing.]

A REMEDY FOR CHOLERA.

Rev. CLARENCE D. USSHER, M.D., Van, Turkey, Asia.

Recently I picked up a piece of paper, apparently cut from some medical journal for the purpose of reinforcing a binding, and my eye caught the statement, by some one who apparently wrote as an authority, that "until now no remedy for cholera has been discovered," "all bad cases die (sic), in spite of remedies." The writer also expressed the opinion that the patients who recover would recover without medicine. About the same time I learned that cholera was spreading in Europe and that there was panic in places.

These things lead me to feel that I have been remiss in my duty as a physician in not putting definitely before the profession the results of treatment of cholera in Van during an epidemic of six weeks' or more duration in the early part of this year.

As the only foreign physician within a week's journey in any direction, my duties are heavy and prevent me from making a scientific report or even making satisfactory records of the numerous cases seen. I wish simply to report a fact and to let others work out details for themselves.

I claim no credit as discoverer of the remedy, nor for its application. Koch of Berlin discovered that "quinin in solution of from 1/1000 to

1/2500 would kill the cholera germ in from ten to thirty minutes." This was applied by Graham and reported by E. B. Fullerton* of Columbus, Ohio, from whose report I obtained my suggestion. I wish to corroborate the statements made there and to say that cholera has lost its horrors here through the use of *quinin* sulphate (or bisulphate, preferably the sulphate) in ten grain doses every hour till bile reappears in stools; from forty to eighty grains have been given. The *quinin* is not absorbed, but acts in the intestines. Aromatic sulphuric acid lemonade proved a satisfactory prophylactic. Sulphate of copper, 1/100,000, for drinking and washing purposes stopped the disease and stamped out the epidemic in the military barracks where hundreds had died. With *quinin*, more than 90 per cent. of the patients recovered, including those brought to our hospital moribund.

With the old lines of treatment, every patient during the first week succumbed, testifying to the virulence of the epidemic. Saturday night at midnight I learned of the new remedy, and after that lost but two patients seen before they were moribund.

Our hospital treatment consisted of the following: *Quinin* sulphate, gr. 10, every hour till rice-water stools ceased and bile reappeared; sweet spirits of niter, dry cupping, heat and friction for suppression of urine; saline injections when the wrist pulse had disappeared (but some patients in this condition recovered under *quinin* treatment without injections). Occasionally a diarrhoea mixture was used when intestinal activity was excessive after the reappearance of bile in the stools.

Where irritability with foul odor persisted, five grains of a mixture of equal parts of the sulphophenolates of zinc, calcium and sodium were given at intervals of from two to four hours.

I am so fully persuaded that *quinin* is nearly a specific for cholera that I feel it my duty to ask you to give this as wide publicity as possible.

A Columbus physician has criticised missionary physicians for not giving the world more benefit from their necessarily large experience. For my part I must confess that my seclusion here for eight years makes me diffident about putting my humble thoughts before my more scientific brethren who have kept abreast of the times.

The above appeared in the *Journal A. M. A.* of February 3rd, 1906. In the same journal of February 17th, 1906, appears the reply on the next page.

* Sajous Annual. 1896, D. 12.

QUININ IN CHOLERA.

COLUMBUS, OHIO, February, 5, 1906.

TO THE EDITOR :—I see in *The Journal*, February 3, what I have looked for for a generation—some acknowledgement of the truth that *quinin* sulphate is a specific for Asiatic cholera. In brief, Dr. Ussher, a medical missionary at Van, Asiatic Turkey, found himself, about a year since, in the midst of an outbreak of cholera, so severe that in the first week of its prevalence all that were seized with the disease died—100 per cent. mortality.

On Saturday night at midnight he began to treat the disease according to my directions (10 gr. quinin every hour until discharges were controlled), with the result that the mortality fell to less than ten per cent. Some of your readers may recall that in my article in the *New York Medical Journal*, August 18, 1904, I set the necessary mortality of the disease at somewhere between five and fifteen per cent., when the remedy is given by the mouth (the only way it should be given), and, preferably in acid solution or a powder stirred up in a tablespoonful of water, as I gave it during the epidemic in this city in 1873.

The scientific part of Dr. Ussher's statement is somewhat obscure. So far as I know, Professor Koch had only demonstrated that in strength of 1/5000 the growth of the spirilla was inhibited. Dr. J. C. Graham, at that time bacteriologist of Starling Medical College (now of Denver), at my request undertook further experimentation, by which he demonstrated that in strength of 1/2500 the germ was killed in cultures in a few minutes.

For thirty years I have been drilling into the largest average medical class in Ohio (save those of one school) that Asiatic cholera is a very curable disease when this remedy in sufficient doses is given by the mouth; that the treatment has been discovered over and over again; that *quinin* is useless given by the hypodermic and intravenous injection methods, as it escapes by the kidneys, never gaining access to the intestinal canal in any sufficient amount. When your last issue arrived I had an article in course of preparation, but I shall probably now await the news from Turkey in Asia. I have written to Dr. Ussher for fuller particulars about the outbreak.

To avoid misunderstanding now or in the future, I wish to state that until after I had used the remedy in 1873 I had never heard of the *quinin* treatment.

ERSKINE B. FULLERTON, M.D.

A PEDUNCULATED FIBROID.

W. H. JEFFERYS, A.M., M.D., Shanghai.

Large tumors are old story in China and fibroids even larger than that which I present have been reported, though most of our very large tumors are ovarian. Yet each of these cases has its own points of interest. My patient was in his fifties and a copper smith by trade. He had first noticed the growth sixteen years previously as a small movable nodule on the right side of the chest and about the fifth rib. It grew steadily and slowly through the years, becoming finally pedunculated and interfering considerably with his work. It was punctured at various times by native practitioners and the scars of these punctures and of the local inflammation they had set up are clearly shown in the accompanying photographs.

In walking, the patient carried the tumor on his right hip posteriorly and leaned far to the left, and when seated he placed it on a low table at his side. When stretched, the neck was only about half the size it showed when relaxed. He wore one pair of trousers of the ordinary variety and another huge pair to include the tumor, and one day, in crossing from the hospital to the out-patient department, he was arrested by a zealous policeman under suspicion of removing hospital property under his voluminous garments. His joy on being searched in our presence and being the innocent cause of complete loss of face on the part of the policeman was delicious to behold. It almost made up to him for having the tumor.

In June last he appeared, but refusing operation was lost sight of till October, when he again presented himself, having made up his mind "to have it taken off, though he believed it would kill him." At least he had been so assured "by every one in his village." In this connection I remember that "his village" came to visit him on the day of the operation, and although it seemed cordially glad to see him recover alive from his anæsthetic, it, like the policeman, did seem a trifle "m-mien-khong tse."

Of course the removal of the tumor was easy, hemorrhage being controlled by hip-pins with a large rubber tourniquet about them. There was an extensive hypertrophy of the pectoral muscles, which humped itself into an unsightly lump in the healing process and finally suppurated, requiring removal en masse at a later anæsthetization. Otherwise recovery was satisfactory.



FRONT



REAR.



RESULT.

SIXTY-POUND FIBROID TUMOUR. SIXTEEN YEARS' GROWTH.



MARGARET ELIZA NAST MEMORIAL HOSPITAL, SIENG-IU, CHINA.
(Dispensary foundation in foreground.)



METHODIST COMPOUND, SIENG-IU, CHINA.

1. Boys School. 2. Wm. Nast Memorial Church. 3. Parsonage. 4. Girls School. 5. Missionary Residence. 6. Margaret Eliza Nast Hospital. The Woman's School is opposite Girls School.

The patient of course gained rapidly in weight and seemed like an altogether different individual.

The tumor weighed, after removal and exsanguination, sixty pounds ; was pretty healthy throughout, skin and all, though the centre was the object of calcarious degeneration. There was a large quantity of oily serum throughout the subcutaneous tissues. The body of the tumor was fibroid.

I apologize for the unscientific presentation of this case. It really was hardly worth a deeper investigation. The lesson I learned was, in future, to remove hypertrophied muscular support at the time of the primary operation.

MARGARET ELIZA NAST MEMORIAL HOSPITAL.

A new hospital for women and children, the Margaret Eliza Nast Memorial Hospital of Sing-iu, Fukien Province, was dedicated by Bishop Bashford November 4th, 1905. This hospital is the gift of Mrs. Wm. A. Gamble, of Cincinnati, Ohio, and is erected as a memorial to her mother, Mrs. Wm. Nast.

The situation is ideal ; just outside the west gate on a little hill is the Methodist Mission with its girls', woman's, and boys' schools, church, and W. F. M. S. residence. Adjoining this is the hospital compound, comprising one and a half acres of land. About twenty-five fruit trees make a nice shady place for the patients, who are able to spend some time out of doors. The main building is two stories high, 130 feet long and fifty feet wide. Wide halls run through the centre of the building. On the first floor are two suites of rooms for the physicians, chapel, pharmacy, laboratory, supply room, dressing room, and three wards. On the second floor are the operating room, eye room, nine light, airy wards, and a bath room. Back of the hospital, and connected with it by a short passage, are the dining room, kitchen, nurses' rooms, a large bath room, and another room for heating the water. A little further away is the laundry and a covered place for drying clothes. The dispensary is a separate building of three rooms : one serving as an entrance to the compound and the other two as waiting and consulting rooms respectively.

Miss J. E. M. Lebens, who is a graduate pharmacist and nurse of experience, was the architect and also superintended the building.

EMMA J. BETOW, M.D.

In Consultation.

WENCHOW, *8th May, 1906.*

DEAR MR. EDITOR :

Will some of your readers, through the medium of your columns, kindly give me, and possibly others who are in a like position, information on one or two matters of general interest.

THE TRAINING OF MEDICAL STUDENTS.

I have eight assistants who receive as much teaching as my spare time will allow ; these men I hope to retain as permanent helpers. This year I have had quite a number of applications from men who want to be taken in for a few years' training. These men are not Christians, but would be prepared to conform to the hospital rules and in addition would pay their own expenses.

What I should like to know is :

1. Would it be advisable to take in students with so little spare time to give them a proper training ?
2. What influence do these non-Christian students have on the Christian assistants and on the hospital work generally ?
3. How do these non-Christians behave afterwards in private practice ?
 - a. Do they represent themselves as members of the church for purposes of personal gain ?
 - b. If they do not represent themselves as such, are they not regarded as Christians by the Chinese and their actions judged accordingly ?
 - c. With a partial training do they do discredit to Western medicine ?

NECROSIS OF THE LOWER END OF THE FEMUR.

Recently I have seen several young men presenting all the symptoms of the above disease, namely trouble of some years' duration, enlargement of the bone, sinuses discharging pus ; these sinuses leading down to bone, which in some cases is felt to be bare, in some loose. Several of these cases have been complicated with swelling, heat and pain of the knee joint, as in the case reported in the January issue of the JOURNAL last year.

A young man who was in the hospital last month had all these symptoms, except that loose or dead bone could not be felt ; the femur was examined by the finger through the sinus but no cloacae could be reached. The pain and swelling of the knee joint were very troublesome.

The subjects on which I should be glad of information are :—

1. When the cloacae in the bone cannot be discovered via the sinus, is it correct to gouge out the encasing bone at the most convenient spot, *i.e.*, on the outer side of the femur?
2. In cases in which the knee joint occasionally inflames does the operation entail any risk of suppuration in the joint?
3. Is the operation a difficult or dangerous one?

The enclosed extracts of an address by Mr. Edmund Owen are taken from the *British Medical Journal* of February 3rd, 1906.

These remarks, although prefacing an address on Acute Bone Disease, are yet of special interest in these cases of necrosis as showing why the lower end of the femur is so frequently attacked and in what proportion different bones suffer.

I will begin by giving a short account of the development of a long bone, and will take the femur at the age of eight or ten years. It consists of a diaphysis of fairly solid bone, and of two extremities which, though also of bone, are separated from the diaphysis by an intervening layer of cartilage. The layer of cartilage keeps on growing; and, as it grows, the surface next to the diaphysis is steadily converted into new bone. Thus, the increase in length of a long bone is effected by deposits of new osseous tissue at the end of the diaphysis, and this is continued until, in due course, the epiphysis ossifies onto the shaft, when growth is complete.

As a general rule the epiphysis become ossified onto the shaft either at puberty or at manhood, and, obviously, the bone grows more at what I will call the "manhood end" of the diaphysis than at the "puberty end," because it has a longer time for the purpose. The knee ends of the femur and of the tibia are their manhood ends, but it is the reverse in the upper extremity, the shoulder end of the humerus and the wrist end of the radius and ulna being chiefly concerned in the elongation of the skeleton of the arm.

The new bone at the growing end consists of tissue of great physiological delicacy, and is, therefore, the more likely to be the seat of traumatic inflammation, and disease generally, than is any other part of the bone. Indeed, every disease to which osseous tissue is heir loves this delicate material; syphilis, tubercle, sarcoma, all attack it when they have the chance.

Two of the last epiphysis to join on are the knee-ends of the femur and tibia, and as their respective diaphysis are very large and are much exposed to injury by falls, kicks, blows, or strains, there is a double reason why septic osteitis is so often found in the neighbourhood of the knee, and I propose to-day to deal with septic osteomyelitis affecting the knee end of the femoral diaphysis.

Some few years ago Mr. Crowle and Mr. Kellock, who were respectively the Surgical Registrars of St. Mary's Hospital and of the Children's Hospital, very kindly prepared some tables for me showing the relative frequency with which various bones were affected by acute septic inflammation. Mr. Crowle's cases were taken from over a period of fourteen years, ending 1894, while Mr. Kellock's researches extended back for ten years. Altogether 165 cases were accounted for, boys being more often affected than girls in the proportion of five to three. Of these 165 cases the femur was the bone attacked in 83 instances, the tibia in 47, and the humerus in 20. Next in order came fibula, radius, ulna, clavicle, and calcaneum.

Thus, out of the 165 cases the femur and the tibia were implicated no less than 130 times; these bones, of course, being the most exposed to injury. I have, therefore, good grounds for choosing a boy for the subject of my illustrative case, for letting the affected bone be in the lower extremity, and for naming the femur as that bone. Then I take the lower end of the diaphysis as the affected region, because of its being most commonly involved and because of its being close against the knee-joint which is so often implicated in acute rheumatism.

THE TREATMENT OF DYSPEPSIA.

It is a general experience that acid, such as five drops of *acid nitro hydrochlor dil* in water, before a meal, answers better in most cases of dyspepsia than *bicarbonate of soda*; such has been my experience in Wenchow; in England the converse was the case. What is the explanation?

Does the rice diet lead to a deficiency of acid in the digestive juices, or is there too much which the acid before meals inhibits, or does the acid merely act as a bitter tonic, or does some pass on to the intestine and inhibit fermentation?

Sir James Barr in the *British Medical Journal* of January 27th, 1906, says that buttermilk is valuable in the treatment of typhoid fever and other disorders of the intestinal tract, because it contains *lactic acid*, which inhibits the growth of putrefactive organisms.

Yours sincerely,

W. E. PLUMMER.

AN ANSWER TO DR. PLUMMER'S QUESTIONS.

The Editors have given me the privilege of seeing Dr. Plummer's questions before they go to press, and I take pleasure in offering an answer thereto.

A. The Training of Medical Students.

1. The correct answer to this question lies within the doctor's own statement. If it is intended to retain the students as "permanent helpers" it is certainly allowable and very sensible to take them on the basis stated. They should be carefully selected men, preferably Christians in name as well as in spirit, though some non-professing Christians who are Christian in principle do very good work. They should be given a course of long duration and be bound by contract to work for the hospital for a given number of years after the course is concluded, provided required to do so. They should not be given a degree, nor generally called I-Sung, but Si-Sang, and given distinctly

to understand that, though they will learn a great deal, they will not be fully competent practitioners of medicine.

2. If the proportion of non-Christians is not too great, they do not stand against the Christian influence of the hospital. Perhaps it is a good thing in some ways, as it is a broader basis of work, and in our experience usually leads to the conversion of such non-Christian students, always supposing they were wisely selected in the beginning.

3. They should not undertake private practice, as they are not fitted for it. They may do some good work, but will certainly do much weak work.

- a. We hardly have sufficient data to answer this question.
- b. They would not be so in this province. (Kiangsu.)
- c. They certainly do discredit foreign medicine, in private practice, not so much by the mistakes they make as by the hopeless weakness of their work and by the insufficiency of their equipment.

B. Necrosis of the Lower End of the Femur.

I have had cases of this sort in the past, two I think, and have one who has now been in my wards for five months. I have not operated on this one as yet, though the drainage has been kept free. The present case is one of necrosis of the femur with involvement of the whole shaft surface and separation from the periosteum, but I am inclined to believe that the necrosis is not central and that recovery is possible without an extensive operation, provided the drainage be kept free and the patient's general condition remains good, as it is at present. One of my former cases did recover, but without any mass loss of bone, and it may be that it was only a very chronic and extensive periostitis.

1. It seems to me that in case of the femur, when no cloacae can be found and the patient is in fair condition, it is best to wait. If later on cloacae are found, or the patient's condition falls off, it is best to make a long incision on the external aspect, open up a long groove in the shaft and remove whatever dead bone can be found, short of the point of severing the bone and perhaps even beyond that undesirable point. One may remove practically the whole shaft of the tibia if the periosteum is in fair condition, because the fibula remains as a support, but in the case of the femur there is small chance of a useful limb if its shaft is more than very partially removed.

2. Suppuration of the knee joint is not at all likely to occur, provided the drainage be kept good.

3. The operation may be tedious and difficult, and though not immediately dangerous must be counted ultimately so. But of course the condition is such as to warrant extensive measures for its relief.

I count it an honor to have been called in in consultation by Dr. Plummer, and though I shall not send in my bill at this time, I ultimately hope to be repaid in kind.

Z.



INFLAMMATION OF THE ANTRUM.

The patient is a woman aged thirty-seven years.

History:—The face began to swell six years ago, and has gradually enlarged ever since; before the swelling commenced there was pain in the region of the second bicuspid tooth.

Condition on admission:—The face is swollen as shown in the photo; towards the nose the swelling is of bony hardness, but on the outer side there is fluctuation. On examining the mouth pus is found to be oozing from around the root of the second bicuspid tooth which is loose. There is a fluctuating swelling under the mucous membrane of the hard palate adjoining the loose tooth. The patient can breathe freely through the left nostril.

Treatment:—The loose tooth was pulled out and a tube inserted through the canine fossa for purposes of drainage and lavage.

The patient objected to the tube in the mouth and wanted more radical treatment, so the antrum was opened from the cheek, the cavity scraped and a drainage tube put in as shown in the second photo, which was taken fourteen days after the operation.

W. E. PLUMMER.

A SERVICE OF DAILY PRAYER FOR WORKERS
IN MISSION HOSPITALS.

Shanghai Dialect.

Compiled by Z.

各人跪下

領禱人云。奉聖父。聖子。聖靈之名。阿們。

讀主禱文

我侬天上个父。願人恭敬父个名頭爲聖。願父个國度
來。願父个旨意。行拉地上。像拉天上。侬日日用个飯糧。
懇求今朝賜撥侬。饒赦侬个罪。像侬饒赦得罪侬个人。
保佑侬免受試探。救侬離開兇惡。因爲國度。權柄。榮耀。
全是父个。永世無盡。阿們。

啟 求主記念。從古以來。發顯拉个慈悲佬鴻恩。

應 主呀我侬个心仰望主。

啟 主个路是慈悲佬真理。

應 求主使我僉曉得主个眞理。拿主个路。指點我僉。
各人立起

領禱人云 但願榮耀歸於聖父。聖子。聖靈。

應 始初如何。現今亦然。以及永遠。世世無盡。阿們。

聖詩讀一百篇一節至末節

普天下人。全應當向主歡呼。

快活事奉主。到主面前歌唱。

僉應當曉得。惟獨主是天主。創造僉个就是主。僉並非自造。僉是主个百姓。是主所牧个羊。

僉應當進主个門感謝。進主个宮讚美。感謝主。讚美主个聖名。因爲主是聖善。主个憐恤。永遠常存。主个誠實。直到世世代代。

但願榮耀歸於聖父聖子聖靈
始初如何現今亦然以及永遠世世無盡阿們

聖詩或讀一百三篇一至四節皆可

我个心靈。應當讚美主。我个臟腑。應當讚美主个聖名。

我个心靈頌揚主。勿忘記主个一切个洪恩。

主赦免我一切罪惡。醫好我一切疾病。

救贖我个性命。勿致於滅亡。加添恩寵慈悲撥我。像冠冕戴拉

我頭上。但願榮耀歸於聖父聖子聖靈
始初如何現今亦然以及永遠世世無盡阿們

馬太福音二十五章 讀三十一節三十四節三十五節三十六節四十節

人个兒子。趁之伊个榮耀。同之攏總聖个天使來个時候。要坐
拉伊榮耀个位上。

難末王要對右邊个人話。我个爺祝福拉个。來。接受創世以來。

爲之。卽預備拉个國度。因爲我餓。卽撥我吃。我渴。卽撥我呷。我客旅。卽收留我。我赤膊。卽撥我着。我生病。卽來望我。我拉監裏。卽照應我。

王要回頭伊拉話。我實在對卽話。既然照顧我第个弟兄當中。最小个裏一个。就是照顧我也。

啟 主是天主。發慈悲。賜鴻恩。常庄忍耐。并且大有哀憐。咭真實。

應 求主將主个道指點我。我要行主个真實。

啟 我佢要禱告。

爲病人禱文

最慈悲个父。安慰人心个天主。我佢拉困苦个時候。獨有主能

殼保護。現在主个奴僕有病。佢要爲之^{伊拉}禱告。懇求主發慈悲。從天上看顧第个人。憐恤咗拯救^{伊拉}。并且使^{伊拉}想念主个慈悲。心裏得着安慰。再求主保佑^{伊拉}。勿遇着仇敵个引誘。苦難當中。使^{伊拉}忍耐。拉主所定當个時候。使^{伊拉}全愈。從今以後敬畏主。歸榮耀拉主。若然主个旨意。勿使^{伊拉}全愈。求主施恩。使^{伊拉}順服主个旨意。完畢之今世个苦。就可以拉主前享受永生。全倚靠佢个主耶穌基督。阿們。

爲院內執事人禱文

基督我佢个主。全能个醫士。但願祝福第个醫院咗。醫病个事體。哀憐有病咗痛苦个人。使伊拉身體。靈魂。所有个病痛。全能殼全愈。并且求主祝福院中醫士。搭之執事。使伊拉盡忍耐咗

哀憐个心。服事病人。爲之儂看顧伊拉。叫伊拉跟儂走拉全愈个路上。使得伊拉常庄保守咗堅固。愛儂主。阿們。願我侬衆人。常受侬主耶穌基督个恩典。天主个慈悲。聖靈个相通。阿們。

隨時禱告

爲病孩禱文

全能个天主。慈悲个父。人个生死。全拉主手裏。求主發慈悲。從天上看顧現在生病个小囡。拉主所定當个時候。除脫伊个病痛。哀憐咗拯救伊。若然主个聖意。要加添伊年紀。求主使伊爲之主咗活。誠心事奉主。終身行善。歸榮耀拉主。若然勿加添伊个年紀。求主接伊到天上个住處。就是凡係信主耶穌人个靈

魂。享永遠安息。咗福氣个地方。求主爲之愛子救主耶穌基督。應允佢个禱告。主耶穌搭聖父。聖靈。惟一天主。一同永生。一同掌權。世世無盡。阿們。

第一禱文

無所不能个天主。第个拉主面前个女兒子。是有病个。求主賜佢就是主个用人。可以有巧手咗善法。減少伊个痛苦。得着全愈。到後來个日脚。明白天父个愛心咗慈悲。并且生出感謝主个心。咗來服事主。全倚靠我佢个救主耶穌基督咗求个。阿們。

第二禱文

無所不能个天父。曾經降聖子到世界上來。死拉十字架上。後來榮耀升天。求主使我佢照主耶穌个模範行事。後來也能殼

得着永生咾平安。全倚靠佢主耶穌基督。阿們。

第三禱文

求無所不能个主賜恩。加增病人身體上个力量。使伊拉拉撞着痛苦个時候。勿至於乏力。人受着痛苦。無非是主个好意。求主幫助伊甘心受苦。以致得着想勿到个福氣。全倚靠捨身贖我侬罪个聖子耶穌基督。主耶穌與聖父。聖靈。永生永王。世世無盡。阿們。

爲遭難者禱文

慈悲个天主。我侬个天父。曾經用聖經教訓佢。主本來勿願意使世界上人憂愁苦惱。現在有主个門徒遭著患難。要佢爲之

伊拉

禱告。所以侬特爲求主看顧

伊拉

。主照之主个旨意。曾經用艱

難困苦試煉^{伊拉}。但求主仍舊憐恤^{伊拉}。使^{伊拉}明白曉得主懲治^{伊拉}。

猶如爺个懲治兒女。拉困苦當中。使^{伊拉}忍耐。順從主个旨意。又

使^{伊拉}想念主个慈悲。心裏得著安慰。再求主拿主面上个光輝。

照亮^{伊拉}。使^{伊拉}常享平安。全倚靠佢个主耶穌基督。阿們。

主曾經教訓佢。凡係所做个。若然無末愛心。全是無益。愛心是

平安个源頭。萬德个綱領。人若然無末愛心。雖然活。拉主面前

像死。求主使聖靈担第个最寶貝个愛心。賜撥我佢。懇求主看

獨生聖子个面上。應允我佢。阿們。

○求主施恩。凡係事體。拉前頭引導我佢。拉後頭幫助我佢。使

我佢行事。奉主開創。奉主經營。奉主成全。歸榮耀於主个聖名。

將來靠主个慈悲咗。得著永生。全倚靠佢个主耶穌基督。阿

們。

無所不能个天主。拉第
个時候。賜恩典使佢同
心禱告。主曾經應許。若
然有兩三個人。奉之主
个聖名。聚集禱告。主必
定應允个。現在佢所願
所求个。若然使佢有益。
懇求主應允。求主使佢
今世明白主个聖道。來
世得著永生。阿們。

Medical and Surgical Progress.

Surgical.

Under the charge of J. PRESTON MAXWELL, M.B., B.S., F.R.C.S.

ACUTE BONE INFLAMMATION IN CHILDREN.

Owen in the *British Medical Journal* for February 3rd, 1906, writes on this subject. It is an important disease and one which a medical missionary in the East may meet at any time.

The writer points out how often errors are made in diagnosis, and then goes on to narrate the clinical features.

The picture is so typical that it may be quoted at length:—

"I will take the case of a boy who, having put on his skates for the first time, falls and hurts the lower end of his femur—not very severely, however, for he goes on with his awkward attempts, and some hours later he limps home. Next morning he seems quite right, and in a week's time he has, perhaps, forgotten all about the accident. But a few days later he complains to his mother about his *knee* being painful. His mother, seeing that he is evidently in pain, looks at his limb, and detects the presence of several of the cardinal signs of inflammation, for the skin is flushed, puffy, and hot, and the boy dreads the limb being touched. What more natural than that she should think that the boy has *rheumatism*? at any rate, that is her 'diagnosis.' It is a simple and comprehensive term, and we ourselves have sometimes sought its hospitable shelter when driven before the winds of nosological uncertainty.

The mother sends an urgent message to the doctor, saying that the boy has rheumatism in his knee and is very ill. On his way there the doctor says to himself, "Acute rheumatic arthritis; so I shall find the knee hot and swollen, and the boy's temperature will be up."

It all turns out in accordance with his soliloquy. The boy's face is flushed and he looks ill—unusually ill, perhaps, for a case of rheumatism—the knee is swollen and hot, and the thermometer registers 103° in the armpit. Forthwith he pre-

scribes a mixture containing *salicylic acid*, and he has the tender knee wrapped in cotton-wool. And inasmuch as he has written a specific he feels safe in promising that the boy shall have a better night and be free of pain in the morning.

But when he pays his after-breakfast visit he finds the boy much worse in every respect, and he is told, somewhat reproachfully, perhaps, that not only has he not slept at all, but he has been "wandering" all night.

Therefore the dose of *salicylic acid* is increased, and fomentations are applied to the knee; but the boy becomes acutely delirious, septic endocarditis supervenes, and he dies with the disease unrecognized. The death certificate reads thus: "Acute rheumatism, three days; endocarditis, one day." And everybody has to be satisfied. As a matter of fact, the boy died of acute septic poisoning from the end of his femoral diaphysis, the endocarditis being a manifestation of pyæmia, and clearly it ought not to have been regarded as confirmatory of the correctness of the diagnosis of acute rheumatism."

One of the principal signs of surgical progress is that this story is fortunately less common than it was. Still even in the present day the like is by no means unknown.

Owen points out the urgent need for immediate exploration in these cases, for a patient search for the focus of inflammation even to exploring the bone. It is possible that pus may not be found, but if one waits till pus is certainly present, the probability is that the case will be lost, or become very serious. And even if the pus be found, it must be remembered that the mischief may not be fully arrested, so that constant vigilance is required in the treatment of these cases.

In conclusion the writer enters a caution against too great readiness

to conclude that because a case improves after an injection of the appropriate serum, the happy result is necessarily due to the serum.

He regards the latter as a therapeutic agent still on its trial.

RECTAL FEEDING.

In the *British Medical Journal*, March 17th, 1906, there is an interesting editorial based on a paper in the March number of the *Scottish Medical and Surgical Journal*. Although the experiments therein narrated related to cases of gastric ulcer yet the whole paper is of deep interest to surgeons who so often have to use this means of nourishing their patients.

The main point brought out by the paper is the *low value* of rectal feeding. It is in the opinion of the authors subnutrition of a pronounced character.

They advise as a good nutrient enema the following:—

Yolks of two eggs.

Pure dextrose, 30 grams.

Common salt, 0.5 gram.

Pancreatized milk, 300 c.c.

This should be given every six hours by means of a soft rubber

catheter and a small sized filter funnel.

The editorial goes on to speak as follows:—

"It should be remembered that injection of nutrient material into lower bowel excites gastric secretion, and may thus account for the pain in the stomach frequently complained of in gastric cases under rectal feeding. This is important, because rectal feeding is often advocated in gastric ulcer in order to give complete rest to the stomach, not only from food but from the secretion of gastric juice. If the latter result be not attained—and there seems to be no doubt about this point—it is probable that the healing of the gastric ulcer would be more likely to take place when the patient is allowed a certain amount of food, such as milk, which gives employment to the gastric juice and protects the ulcer from its action. In the opinion of the authors, the conclusion to which this study of metabolism leads is that rectal alimentation has a more limited field of usefulness than is usually supposed, as in the treatment of acute gastric diseases it interferes with complete gastric rest by inducing gastric secretion, while it does not sufficiently nourish the patient."

Under the circumstances it seems very doubtful whether it would not be well, in cases of gastric surgery such as gastro enterostomy, to depend less on nutrient enemata and from the first to give small quantities of fluid food by the mouth.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

THE IMPORTANCE OF THE COLON.

From the *British Medical Journal*, April 7, 1906. An account of a case of ulcerative colitis treated by operation by M. S. Monier Williams.

The case is one of a gentleman, fifty-two years of age, who came under Mr. Monier Williams' care in 1897 suffering from abdominal pain and diarrhoea with hæmorrhage. The motions, from five to fifteen in the twenty-four hours, were excessively offensive, semi-fluid in charac-

ter, and occasionally contained, besides blood and mucus, a little pus. Examination of the abdomen and rectum revealed nothing abnormal.

Treatment in the ordinary ways was given with only temporary benefit, and on the whole he got steadily worse till December, 1900, when he was exceedingly ill. He had from ten to twenty hæmorrhagic stools daily, was very emaciated, and had lost control of the sphincter ani. It was finally decided, after consultation, that right-sided colo-

tomy offered the best chance of saving the patient's life. The large intestine was opened close to the cæcum and no spur made, in the hope of subsequently closing the aperture.

Great difficulty was encountered in controlling the fæcal discharge, which gave rise to considerable excoriation of the skin; when this difficulty was once overcome the patient improved with great rapidity. In November, 1901, his general health was quite good, but the colitis was not quite well, as occasionally a little blood and mucus was passed both by the cæcal anus and by the rectum. Very little fæcal matter passed the plug, and so along the large intestine, as much perhaps in a week as would make one small motion.

About six months later, although there was no change in the local condition, he began to lose health. He became emaciated again without any apparent cause and commenced to go down hill rapidly, so that in September, 1902, he was exceedingly weak and ill. It occurred to me, says Mr. Monier Williams, that although two years previously his life had been saved by an operation which had secured such a measure of rest for his colon that the serious hæmorrhage from which he had suffered was practically cured, he was now in danger of losing his life from want of use of his colon; our interference having deprived him for a prolonged period of time of the functions of that organ. Now the most obvious and therefore probably the most important function of the colon is the absorption of water. We know that little if any water is absorbed in the stomach, and looking at the very fluid nature of the contents of the cæcum that the small intestine is probably equally inactive in this direction. The normal evacuation from the rectum is, however, solid, so that

great absorption of liquid must take place in the large intestine.

To supply the necessary liquid I commenced at the end of September, 1902, to make daily injections into the large intestine of two pints of distilled water containing two teaspoonfuls of *sodium chloride*. The liquid was allowed to flow in very gently through a soft œsophageal tube introduced into the cæcal opening to about as far as the centre of the transverse colon. Despite all precautions, on an average only about half pint was retained. But I soon had the satisfaction of noticing a great improvement in the patient's health. His strength began to return, and each week he put on a few ounces of weight. At the end of this period, that is, in the middle of January, 1903, when I was no longer anxious about him, he suddenly developed purpura hæmorrhagica. He commenced to bleed from every mucous membrane, except that of the bladder, and there were small hæmorrhage into his skin all over his body. Blood poured from his colotomy wound, he vomited and coughed blood, and his gums and nose oozed continuously; six and a half pints of blood were collected in thirty-six hours. The injections were discontinued for a week and then resumed and continued for another two and a half months to the end of March, with occasional intermissions of a day or two about once a fortnight, owing to the recurrence of hæmorrhages. The blood was examined on two occasions and found to be quite normal. Notwithstanding the hæmorrhages the patient improved steadily in health and weight. From April 1st ordinary distilled water, without the addition of salt, was injected daily for three weeks, when a severe attack of purpura hæmorrhagica supervened and the treatment had to be stopped. Hypodermic injections into the axillæ were next

tried for three weeks, when there was another slight hæmorrhage and further the patient refused any longer to continue the treatment on account of the discomfort caused by the injections.

The problem, therefore, was what to do next, and the solution of the difficulty was in the end quite simple and effectual.

I instructed the patient to completely block the cæcal anus at night-time. During the day time the tube and receptacle were retained. In this way the contents of the small intestine flowed norm-

ally into the large intestine during the night-time, but passed through the artificial anus into the bottle during the day time. The colon had twelve hours of absorption and twelve hours of rest; its working hours being of sufficient duration to keep the patient in good general health, and its resting hours sufficient to keep in check the colitis, which though still not absolutely well, caused no inconvenience. This plan was adopted in May, 1903, and as the patient is still nearly three years later in perfect health, I think there is no doubt as to its success.



The China Medical Missionary Journal.

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No. 4.

Editorial.

As the Editor will be in Japan during August, the next issue will be prepared two weeks earlier, and all matter should be in by August 1st, if possible.—*Editors.*

We have received an interesting letter from Tientsin, signed "A Mere Medical," which we reserve for Editorial comment in our next issue. Will the writer be so good as to send us his name, which will be held confidential if so desired?—*Editors.*

We have received the following important letters from our President and our Acting-Secretary. It is evident that they demand our earnest attention and should receive it, but as they speak best for themselves, we print them as they stand and leave you to believe that they have our cordial seconding. We have had no other official notice, and have not yet been consulted concerning the medical aspects of the Conference. It is our own opinion that except for a general question or two, the medical questions are most profitably to be discussed in a distinctly medical section where we may talk freely and fully as we think.

SHANGHAI, 25th May, 1906.

DEAR DOCTOR :

Re the coming Medical Conference in 1907. Would it not be well in the next number of the JOURNAL to ask (1) the date most convenient, (2) for subjects for papers ?

The General Conference is fixed for April 25th-May 6th. Through the summer months many medical men will meet at the summer resorts. They could confer on these two important points and let you or me have their deliberate judgment. Give it a prominent place in the JOURNAL, ask those thus meeting together to take united action and it would greatly help those who have the matter in hand.

Hoping you are all well,

Yours sincerely,

CECIL J. DAVENPORT.

MOUKDEN, May 14th, 1906.

DEAR DOCTOR :

I have had some communications regarding the Centenary Conference, and I am disappointed that there is no medical missionary representative on the Executive Committee, and that medical missions have not got a better place on the tentative programme. Were none of you medicals in Shanghai consulted in the matter ?

I have been asked to act as Chairman of the Medical Committee. If I am to undertake this duty I shall require to depend on you and other friends for the necessary information, as being so far away I am rather out of touch with things. I write now to ask if you can kindly supply me with the latest and most complete medical mission statistics you may have ; and I should also feel grateful for a complete list of medical missionaries in China with their locations. If you have not got these, will you kindly let me know how and where I can secure them. Of course I shall gladly bear any expense that may be necessary.

Please excuse a short and hurried note.

With kindest regards,

Yours very sincerely,

DUGALD CHRISTIE.

PRESSURE OF WORK.

The reports of the various mission hospitals in China tell an almost identical tale this year. "Pressure of Work" is the theme. There are more patients by far than ever before. There is more trust in scientific medicine. There is more work than can be done. This is very good news indeed. It is also exactly what was bound to happen. Given a reasonable, thinking people, overwhelmed with superstition and dependent on a thoroughly irrational and grossly ignorant practice of medicine, then on a Christian basis offer them scientific medicine in a practical form and the result is a foregone conclusion. We have done this and our hospitals are full. There is more to be done than we can possibly attend to ; we are working up to and beyond the breaking point. Well ! this is what we came to China for and precisely what we most hoped for. It is the sign of the harvest of our particular field of work. It is a matter for the profoundest thankfulness, and we are deeply thankful. We venture to predict, too, that every year from now on the pressure upon our resources will tremendously increase, that each year we

shall be harder pushed and that instead of there being some relief in sight, there is absolutely no limit to the flood that is going to beat upon our doors for years to come, build we them ever so wide and ever so numerous. A certain hospital in China five years ago had one physician and forty beds, and was full; now it has ninety beds and two physicians and it is crowded. In two years it plans to have three physicians and sixty more beds and it will then be overwhelmed.

We are, as we have said, very thankful, but we are also overworked and very tired at times. Some of the reports sound too much tired to make comfortable reading. The Association's heart is very much with all the tired fellows, and especially with those who, far in the interior, are driven with work, tired and alone. God comfort and help you and make you wise as well as merciful. Remember that if there had not been this great need you would not have come to China! Remember that you are not personally called to do everything there is to be done in China. Leave a bit for others to attend to. When you have reached the limit of your health's safety, your duty ceases, and when you overstep this limit, you probably do yourself and certainly do many future patients a moral wrong. It is your duty to be wise as well as merciful. Remember, too, the old saw which the JOURNAL continues and will continue to drag in on every occasion, that when you have passed the limit of work you can do well, you are doing poor work, and poor work is never in this world Christian work. Christ did no manner of poor work, and when the time came He left the multitude. So shall you do wisely also.

MEDICAL DEGREES IN CHINA.

A second mission college has been incorporated under American law and is entitled to give degrees in China. St. John's College, in Shanghai, was incorporated in January last under the laws of the District of Columbia as St. John's University. It announces that the Degree of Bachelor of Arts will in future be conferred on graduates of the School of Arts and Science, and that that of Doctor of Medicine will be given to graduates from the school of medicine who have completed the five-year course and have maintained

throughout the entire course the general average of 75 per cent. This adds a fifth year to the course heretofore given, and for which students received and will still receive a certificate. It will be spent as an intern in hospital and be largely devoted to clinical and pathological work.

As is seen, St. John's College, which has always held its standard high, recognizes a distinct responsibility in this new field of giving degrees. It adds a year to the course, a year of practical experience under the direction of the clinical professors, it requires a thorough knowledge of hospital laboratory work, and it selects its candidates for the M.D. by requiring a general average which at this particular college stands for a considerable degree of excellence and represents hard work done during five years of graduate student life. We shall have more to say on this subject in the Editorial which follows. But first we wish to call attention to the responsibility which is assumed by colleges taking upon themselves to give medical degrees. By a degree in medicine we understand an authoritative expression on the part of a licensed medical school of the entire fitness of the recipient to be entrusted with the medical care of the sick, the institution believing the recipient to be sufficiently educated and skillful and of sufficient mental and moral calibre to study and care for his patients and of such excellence of judgment as to render him successful where success should be expected and a safe man in whom patients may put their trust. It is not a certificate of a certain amount of medical information, but, as outlined, much more than this. The institution which undertakes to give medical degrees is responsible not only for seeing that the recipients pass a certain grade but also that they show themselves responsible and moral in the matters indicated. If this is true at home, it is truer here in China, where the law of the land does nothing in the way of control in these matters. And we trust that the schools which undertake this responsibility will do so with hyper-conscientiousness both as to their own fitness to select such men for their honors and also of their ability to carry their students to such fitness for professional responsibilities. There are not more than four medical schools in China at this time which, in our judgment, are up to assuming this responsibility, and, even with these, conservatism and great carefulness should be the unfailing practice.

IN CONSULTATION.

In presenting a couple of very intelligent questions for discussion at the hands of the Association, Dr. Plummer shows that he understands in the fullest sense the purpose of the Association, and that he has as well a keen appreciation of the value of professional consultation. We may add, too, that he has a well-developed conscience. We trust that he may find a hearty response and some intelligent help in his desire. It is a wise man that sees clearly his difficulties and appreciates the fact that two heads are at times, many times, wiser than one. It is not a sign of true wisdom to persuade one's self than one probably knows better than everyone else. The best physicians are those who make most use of the privilege of consultation, the poorest, those who fear to ask advice, lest it be construed as a sign of professional weakness.

Now it so happens that in our work many of us are so situated that a consultation is rarely to be had in the ordinary course of work. The method chosen by Dr. Plummer is, however, open to us all at all times, and though slow, is sure, always providing there are those among us who are not so eaten up with the certainty that we are too busy to consider any question that does not immediately concern our own day's work that we can look carefully at a question that is puzzling some one else.

The JOURNAL has placed these questions in a department by themselves which it will call "In Consultation," and whatever answers they may prompt will be also so placed, except when they are made in editorial form. The Editors themselves like nothing better than a chance to have their little say in just such matters, and they will no doubt do their share of talking. They trust that this new department will find occasional patrons and prove of real service to all such.

[Signed Editorial.]

THE COMING CONFERENCE.

The whole missionary body throughout China is looking forward with keen interest to the Centenary Conference which is to be held April 25th-May 6th of next year. There is hopeful expectation that solutions will be found for many pressing and

important questions ; and also that more suitable methods may be attempted to meet the already much changed condition of China.

Our Association, at its last gathering, arranged that its next meeting should take place at or about the same time. May we not come up in the same confident spirit that God will enable us to attempt and do great things !—things that shall advance His cause and kingdom through our special calling !

Doctors Butchart, Venable, Lincoln and the writer were appointed a committee to make arrangements.

In our JOURNAL of November last was an Editorial appeal, to all members of the Association, asking for suggestions as to date, duration, and subjects for discussion. As far as we know after six months, and within nine months of the time, no answers have reached head-quarters. If members give no better support than this it does not augur well for the future.

When this present number of the JOURNAL arrives very many will be gathering together at the different health resorts for the summer. We urgently ask that these questions may be taken up as a matter of business. Meet together and fix the time, decide the number of sessions to be held, and send suggestions as to topics for discussion.

Should the date fixed for our conference be a few days previous to that of the General Conference, it is more than probable that we shall be able to speak with official and united voice on some point of medical missionary work which is to be brought up at the General Conference.

Again, if we wait until after the General Conference we get into race week, a time when most good folk prefer to be out of Shanghai. Therefore the most appropriate time appears to be between April 17th and 24th. Our last conference was much too crowded to do justice to the papers and subjects. Are we to have a longer session this time ?

Your committee begs instructions and suggestions on these and kindred points. Let each member feel that she or he has a duty to perform, an opportunity to use, to help on this united gathering, so as to make it of much use to us all and a blessing in the Master's service.

C. J. DAVENPORT.

[From the *Recorder*.]

THE CHINA CENTENARY MISSIONARY CONFERENCE.

April 25th—May 6th, 1907.

The subjects which are to have a place on the programme, and the Committees that are to deal with those subjects, have now been selected.

Every suggestion sent in was carefully considered, and if some important subjects have no place on the programme, it should be remembered that the Conference lasts for *ten* days only. Papers are to be prepared, and these will be in print before the Conference meets, but they will *not* be read at the Conference. Each subject will be introduced to the Conference by a resolution or series of resolutions based on the paper that has been prepared.

The selection of the Committees has occupied much time, and the list now printed is subject to correction. In anticipation of inquiries why some well-known and honoured names are not found in the lists, it will be sufficient to say that not every missionary is a delegate, and that some who have been appointed delegates are going on furlough or are burdened with other responsibilities.

The number of delegates, including those who come under the "twenty-five years in China" rule, is 449. Several missions and districts have yet to report. To these a final appeal is made to reply promptly to the second circular which has been sent to them.

The Conference will commence (D. V.) on or about *Thursday, April 25th next*.

PROGRAMME.

First day. Organization, Committees, Reception.

Second day. I. The Chinese Church.

Third day. II. The Chinese Ministry.

Fourth day. III. Evangelistic Work.

Fifth day. IV. Education.

Sixth day. V. Woman's Work.

Seventh day.—Morning. VI. Medical Work.

- (a). The doctor as a missionary—how can his work be made a greater Christian force?
- (b). Religious work in the hospital.
- (c). How best to follow up and keep in touch with hospital and dispensary patients.
- (d). Medical training for Chinese doctors—its value and limitations.
- (e). Medical work for women by women.
- (f). Nursing as a profession for Chinese women.
- (g). Special work—lepers, the insane, opium refugees, etc.

Seventh day.—Afternoon. VII. Christian Literature.

Eighth day. VIII. The Holy Scriptures.

Ninth day. IX. Comity and Federation.

Tenth day. X. The Missionary and Public Questions.

Tenth day. XI. Ancestral Worship.

Tenth day. XII. Memorials.

PROGRAMME COMMITTEE.

MEDICAL WORK.

Chairman—Dr. D. Christie.	U. F. C. S.	Moukden.
Dr. W. H. Boone.	A. C. M.	Shanghai.
Dr. Agnes Cousins.	L. M. S.	Hankow.
Dr. S. R. Hodge.	W. M. S.	Hankow.
Dr. E. G. Horder.	C. M. S.	Pakhoi. (<i>Lepers.</i>)
Dr. N. S. Hopkins.	M. E. M.	Peking.
Dr. P. C. Leslie.	C. P. M.	Changtefu.
Dr. D. Duncan Main.	C. M. S.	Hangchow.
Dr. W. H. Park.	M. E. C. S.	Soochow.
Dr. Elizabeth Reifsnnyder.	W. U. M.	Shanghai.
Dr. W. Wilson.	C. I. M.	Hsüting.

Book Review.

CATECHISM OF HEALTH, giving elementary instruction in the first principles of health and hygiene. By P. L. McAll, B.A., M.B. London Mission, Hankow.

In Chinese of course. We are not fond of Catechisms, but this is for children in knowledge if not in years. It is well done, and should be widely distributed, especially among our fellow-Christians, who will thoroughly appreciate it.

Hospital Reports.

The past year has been the healthiest on record.

There can be no doubt that preventive medicine is the medicine of the future and *Health Department, Shanghai, 1905.* that it is fitting to apply its principles to Shanghai, inasmuch as China is a country of the future, with an enormous latent potential. A demand for translations of sanitary literature has arisen, which has been met by translating this report during the past two years, recently adding sheets giving simple rules for the prevention of disease. It is proposed to undertake the translation of standard works on sanitation and to identify a sanitary press with the work of the Municipal Health Department. Although the main object of the Health Office is to safeguard the health of the foreign resident, the higher altruistic object, which is above that of nationality, is the essential and practical one; for where foreigners and natives are so closely associated, sanitary measures benefiting the one benefit the other.

Tuberculosis is rampant in Shanghai and is its greatest sanitary scourge.

Regarding the Chinese population, the high requirements of sanitation cannot be met without skilled medical attendance in place of the present quackery. The detection of individual cases of infectious disease must of necessity be in the hands of the family physician, and without his intelligent co-operation the work of limiting infectious disease by public measures would be almost impossible. The primary need is a school of medicine run by the Chinese for the Chinese, the teachers Chinese with degrees

in medicine from the best schools of Europe or America. The results obtained by schools where the teaching is done by foreigners in China are very disappointing. Tls. 100,000 a year would send some fifty picked men to the best schools of Europe and America, and would produce within ten years an adequate teaching staff for a local medical school to which would be attached a general hospital for the Chinese.

By the introduction of a new system of collection of house refuse, namely by native barrows, not only are there indications of a distinct sanitary improvement through prevention of dumping of garbage on the streets and alleys, but a saving of some Tls. 35,000 annually will result. Further particulars will be found elsewhere in this report.

The following Public Health Notices, for foreigners and Chinese respectively, have been published during the year:—

The following measures are recommended for the purpose of preventing those diseases which by means of individual careful living and by public sanitation are preventable, such as typhoid fever, cholera, dysentery, diarrhoea and other bowel disorders, small-pox, scarlet fever, diphtheria, tuberculosis, plague and malaria.

PUBLIC MEASURES.

Sanitary Inspection of houses will be carried out free of charge by the Health Department on application to the Health Officer.

Nuisances dangerous to health should be reported to the Health Officer.

Disinfection of premises after infectious disease will be carried out by the Health Department free of charge on application to the Health Officer.

Isolation of cases of dangerous infectious disease is provided at the Municipal Hospital, Range Road. The fee for the wards is Tls. 2 a day and for private rooms Tls. 6 a day. Free beds are available for poor people.

INDIVIDUAL MEASURES.

Kitchen supervision should be thorough, because the preventable diseases specially prevalent in Shanghai are mostly caused by infected food. Every house should, if possible, have a separate larder (place for storing uncooked food), kitchen, and serving-room. The serving-room should contain the Berkefeld filter, ice-chest, table utensils, washing sink, boiled milk, drinks, bread, butter, fruit and other cooked or prepared foods. Cooking or boiling destroys infection.

Vegetables, and fruit grown near the ground, are specially liable to be infected with the germs of typhoid fever, cholera, dysentery and other bowel diseases, and should, before cooking, be strictly kept out of the serving-room and from contact with cooked or prepared food.

Milk should be thoroughly boiled immediately it is received and placed in the serving-room.

Water for drinking purposes should either be boiled or filtered through a Berkefeld filter.

Mosquitoes and flies carry disease, hence fly-covers should be used over cooked food. As mosquito bites may carry malaria, the mosquito net should not be neglected, especially up-country. A small quantity of paraffin oil thrown into stagnant water will prevent the development of mosquitoes; but no stagnant water should be allowed to collect.

Refuse should not be allowed to accumulate, and a proper easily-lifted galvanised iron receptacle should be provided. Nightsoil buckets should be kept securely closed, including those in the servants' latrines. Proper receptacles for these purposes may be obtained at the Health Office.

Yards and drains can be best disinfected by keeping them in a good state of repair and flushing freely with water.

Vaccination should be repeated every three years.

The work among the Hakkas is an outgrowth of the Swatow Mission.

Hakka Work in South China. Special work for them was begun in the opening up of a station at Munkhen-liang by the Rev. Wm. K. McKibben in the year 1882. The difference in dialect is so marked that the missionary had really to learn a new language to successfully carry on work among this people. In the succeeding

years, the Executive Committee of the Missionary Union has made an earnest effort to man the field. Out of these twenty missionaries only five are now on the field and three of the five are now learning the language.

The classes were arranged very much as in previous years. The first and second years' men worked together at anatomy, physiology, and histology. The third year men took materia medica, pathology, and medicine, while the fourth year men concentrated their energies on medicine and surgery. Four new students joined at the beginning of 1905, which made the total eighteen. Thanks to the kindness of our Educational Committee quarters were again found for some of them, as hitherto, in the Divinity School. The work progressed very smoothly during the first half of the year, then came the summer vacation of two months.

The course extends over five years, but we hope students will stay a sixth year to gain further experience. There are two sessions—spring and autumn—each year. Professional examinations are held at the end of every year, as is the case in the Hongkong School of Medicine. Students entering must be over seventeen years of age, of good moral character, must have a thorough knowledge of Chinese, and be able to work simple sums in arithmetic. We hope eventually to raise the standard of scholarship required for entrance and make other useful subjects compulsory. New students are taken on annually at the beginning of every spring session. These are the general lines on which the school is carried on. We hope at the close of this year to have some students graduating.

A glance at the accompanying
Annual Report of the
L. M. S. Men's
Hospital, 1905.

the year :—

In-patients (including 31 opium-smokers)	782
Operations under chloroform ...	455
Out-patients, new	4,083
" return visits 3,073 }	7,156
Opium suicides saved 19, died 7 ...	26

Among the many cases that come some naturally are of special interest, either from a professional or general point of view. We will not trouble friends with a long account of the former, but merely mention one or two.

(1). Stab wound near second left costal cartilage; seven months' duration, resulting in a huge abscess of the lung, drained by counter opening near base of lung with good result.

(2). Necrosis of humerus, plus a fall that fractured the involucrum and damaged the musculo-spiral nerve; an attempt at nerve suture failed.

(3). Stricture of œsophagus; treated by Albert's gastrostomy with fair result.

(4). Serpent bite of leg; patient had tied a cord round leg under knee, and gangrene occurred, necessitating amputation.

(5). Ulcerated elephantiac leg removed, weighing twenty-four pounds.

(6). Clavicle chopped through by a chopper, but brachial plexus and big vessels escaped.

(7). Ruptured popliteal aneurism, treated by ligature above and below; patient's life and leg saved, but calf muscles sloughed.

We cannot report any increase in the number of patients this year, as

Report of L. M. S. we raised the
Margaret Hospital, fees in order,
1905. if possible, to

keep the numbers lower, and it has reduced them slightly.

Extern Practice.—This has increased a good deal this year.

Even when the children are not wanted, as they often are no in Chinese homes, the parents seem

grateful for the care and attention received and often press upon one more than the usual fee to show their gratitude, fully understanding, as they do, that it goes to the hospital work, and that our aim is to bring the knowledge of salvation to the Chinese.

Our in-patient numbers are slightly less than last year, and yet the wards have always been full up. The patients have stayed longer in hospital because we have had more medical cases.

A medical missionary has divided the stages of a missionary career under three heads
Hiao-kan
Medical Mission
Report, 1905. viz.:—

1. Illusion.
2. Disillusion.
3. Clear-eyed vision.

This is a pretty accurate description of anyone seeking to do work among such a people as the Chinese. It is equally true that the people themselves have to pass through very similar stages before much real good can be done among them.

The statistics we now give for the past year represent a terrible collection of suffering and an effort made to alleviate it.

STATISTICS.

<i>In-patients.</i> — Hospital ...	308	} 389
Leper Home ...	81	
<i>Out-patients.</i> — First visits ...	5,555	
Total visits ...	17,356	
Operations under an anæsthetic ...	233	
Minor operations ...	363	
Teeth extracted ...	129	

The past year has been much the same as previous years, but we are happy to report a considerable increase in the number of patients treated, as well as an increase in the income for the support of the work.

Chungking Men's
Hospital Report,
1905.

Twenty-one foreigners have been treated in the wards for foreign patients during the year. We had as high as six foreigners in the hospital at one time. We expect the numbers of this class of patients to be larger as the foreign population in the port increases.

Medical Notes.—For the first time in fifteen years we encountered Malta fever, three cases in all. One a Chinese, and the other two Japanese. In no case did the fever go higher than 103, and only did it reach that height once or twice during the course of the disease. One of the Japanese was in the hospital for 100 days and the other 110. In the case of one of these we were fearful several times that he would not recover, especially, since he had repeated muscular cramps which were most severe; in fact, so severe that they resembled Tetanus as long as they lasted, and necessitated giving *chloroform* at least once. His case was complicated with suppurating parotid glands. *Quinine* had no effect on them.

During the last five years we have had eight caesarian sections; every child alive at the beginning of the operation was saved, and 75 per cent of the mothers. When we consider the length of time that these women had been in labor, from three to eight days, and the very short time that we had to prepare them for operation, we consider it a very good showing. My teaching from the experience gained in these cases, leads me to feel that a complete removal of the uterus and its appendages offers the woman the safest chance for a recovery. This removal adds very little to the shock the woman has already gone through, providing the operation is done quickly and without much loss of blood.

Epithelioma of the penis is a comparatively frequent disease, and we have made a complete amputa-

tion in a number of cases during the year with very satisfactory results with one exception, where the operation was very extensive, and the patient not in a good physical condition.

New Year's eve, 1904, found us moving into the uncompleted premises of the new women's hospital, with two in-patients and only one student-dispenser.

**London Mission
Women's Hos-
pital, Peking.
Annual Report,
1905.**

The eve of 1906 finds us with our building completed, so far as structural work is concerned, and very much done in the way of permanent equipment and organization.

The medical women in Peking met several times to consider the need of trained assistants for our work. The arrangements were not fully ripe for the establishment of a medical school, but it was finally resolved that we should unite for the training of nurses and dispensers.

The girls were to get their clinical work in their individual hospitals, but the lectures were to be taken together.

Towards this end I have almost entirely abolished the heretofore prevalent practice of allowing mothers and friends to live with the patients in the hospital, established a uniform for the nurses, which we supply, and gradually as our funds permit hope to use only clothing and bedding provided by the hospital.

It is remarkable how rapidly the nurses develop as soon as they come to the hospital.

We have had several wealthy Mohammedan girls this year; such delightful girls, the daintiest of little ladies.

We have had Romanists and members of other Missions; no compulsion whatever is used for any to attend services, but we have

never had even a "Passive Resister," creed or no-creed.

As will be seen from the general report, the year of 1905 has been one chiefly of construction and organization. Though 105 cases have passed through the wards, few of them have been of interest clinically.

I have had three cases of stone in little boys. Two were removed by supra-pubic cystotomy. The second case of the two was very serious. There were two large calculi weighing 106 grs., which seemed to fill the bladder cavity; one of them I fractured on extraction. The walls of the bladder were immensely thickened, and its outer surface covered by tortuous veins. The mucous membrane was in a very unhealthy condition. The child was unable to pass his urine for some days and the catheter was passed with such difficulty that I attempted tying it in, but this increased the urethritis. He passed through a severe orchitis, but finally made a perfect recovery.

I was asked one day to see a lady, who was said to be hysterical. She was unable to control the sphincters of either bladder or rectum. I found that she had been wearing an electro-pathic belt, for which she had paid Tls. 80. Her real trouble was a Pott's angular curvature, with pressure symptoms.

During the summer I wrote to every medical woman in China a series of queries on the subject of assistants in the work. I have a sheaf of answers awaiting tabulation. The summary of them will be interesting to us all I imagine.

LILLIE E. V. SAVILLE.

During 1905 there was steady growth in both
Report of Tsing-kiang-pu Hospital for 1905. dispensary and hospital.

The accommodations for men have been totally inadequate; the wards crowded and many turned away.

Most of these cases have been surgical; few medical cases could be received for lack of room, though many applied.

The range of cases has been similar to that of previous years. More serious cases are coming fully prepared to undergo treatment or operation, as the case may be. We are still very conservative as to the cases we take, but each year find more serious and often desperate cases in the wards.

Several large elephantiasis tumors have been removed, sending men home active and useful, who came helpless invalids.

There has been a severe epidemic of diphtheria; about 25 cases have been treated. All the cases treated recovered. Several seen were already *in extremis*. The antitoxin furnished by the Municipal Health Board of Shanghai has been used and found thoroughly satisfactory.

The evangelistic work among the patients has been more encouraging than ever before. Never have the people in the dispensary chapel, nor the patients in the wards or at evening prayers, listened better to the story of the Cross.

Almost all the patients pay for their own food, some of the poorer ones being helped from outside sources, but none are a drain on the hospital funds.

The dispensary patients pay 15 cash—about three-quarters of a gold cent at each visit, and an effort is made to get the well-to-do among them to contribute something to the hospital.

The in-patients are asked to give what they can from \$1 to \$30, though it is clearly understood, if they are poor, they are gladly treated free of charge.

The degree of Doctor of Medicine will be conferred upon graduates from the School of Medicine, who have completed the five-year course, and have maintained throughout the entire course a general average of 75 per cent.

The sixty-seventh annual meeting of this Society was held at Canton in the Medical College Amphitheater, on January 17th.

We have tried to carry on the work of the hospital this year very much the same as it has been in former years.

The hospital was well filled during the first half of the year and our city calls were also numerous, but after the boycott agitation became established, in August, we not only suffered a considerable loss in our income from a reduction of city calls, but the in-patients were also much reduced in number.

Taking everything as we have found them, the year has been very encouraging.

We have had quite a number of virulent cases of small-pox to handle during the year, and a few of bubonic plague.

The evangelistic work in the hospital has been carried on very much the same as in former years. A hospital evangelist, two Bible-women, one teacher, a colporteur, and the pastor of the Second Presbyterian Church, have been faithful in giving the Gospel to all who come.

The medical college has been carried on energetically by Dr. Anton Andersson. In the two classes there are fifteen in regular attendance.

We have been considerably handicapped by the boycott agitation, the strong anti-American feeling,

insufficient accommodation for students, and shortbandedness in the teaching staff.

The Boone Medical School has been organized with the co-operation of members of the medical and associated professions in Central China, in association with the educational work of the American Church Mission in Wuchang.

It is residential in plan, and for the primary years of the course of instruction, the students will reside in the school. During the final years the students may, under direction of the faculty, reside in any of the other hospitals in this centre that are open to the school for clinical instruction.

The discipline, curriculum, examinations and all matters connected with the teaching, are under the control of the faculty, which is composed of those giving instruction in the school.

The school has been established to train men to become properly qualified physicians and surgeons.

The teaching will be given in the English language.

The school will open in February, 1907.

The following are the members of the faculty who will give instruction in the first two years:—

Albert S. Cooper, B.A.

Mary V. Glenton, M.D.

Susan H. Higgius (R.N.)

Sidney R. Hodge, M.R.C.S., Eng.; L.R.C.P., Lon.

John MacWillie, M.D., C.M.

Howard Richards, Jr., Ph.B., E.E.

Charles W. Somerville, M.B., Ch.B., D.P.H., Edin. Cert. Trop: Med. Lond.

W. Arthur Tatchell, M.R.C.S., Eug. L.R.C.P., Lon.

Edmund L. Woodward, M.A., M.D.

Correspondence.

ECKARDTSHEIM, BEZIRK MINDEN, }
GERMANY, *March 25th, 1906.* }

DEAR SIR: I have the pleasure of sending you a proposal for election as member of the China Medical Missionary Association and would ask you to kindly consider my request, which is seconded by Dr. Olpp, of Tungkun.

Although myself not a medical missionary in heathen parts I may claim the name of medical missionary, being on the medical staff of the home mission institutions at Bethel, near Bielefeld, the largest colony for patients suffering from epilepsy in Germany; beside this part of work there are a number (six) of inebriate homes and two labour colonies closely connected with Bethel. Being very warmly interested in all medical mission affairs, and eager to promote the knowledge of this powerful agency in the mission work, I have begun to edit a journal on medical missions which, under God's guidance and blessing will, I hope, make hearts and hands willing to this noble work.

Yours very sincerely,
D. FELDMANN.

—
TAINAN, FORMOSA, }
May 6th, 1906. }

DEAR DOCTOR: I received your letter only yesterday and hasten to reply to it at once, to promise you that I will do the best in my power to help you.

One promise I have to make nowadays, viz., that this all depends on whether there's a Formosa left in the China sea, a Tainan left in

Formosa and a mission hospital left in Tainan. Our mother earth here is playing such pranks just now that we don't quite know where we are. Happily so far there has been no serious damage done in this city, but for the last two months we have never been many days without earthquakes, and some of these have been so severe that a large proportion of the Chinese population have taken to sleeping outside their houses in grass huts. One day, after an unusually severe series of shakes throughout the day, my patients *en masse* refused to sleep in the wards and laid themselves on mats on the ground. Happily we have plenty of space in our enclosure, and the hundred odd patients made quite a pretty spectacle under the trees. We ourselves generally see there is a clear way to the door before we retire at night. Kagi, a populous city forty miles to the north, has practically been wiped out and many small towns and villages round it. I found it a very quaint experience the other day doing a large Halsted operation for cancer of the breast and wondering whether my native assistant's nerves would stand the shock of a big earthquake or if I might suddenly find myself and wife alone with the patient.

There now I did not mean to worry you with a long letter. I hope I may make your acquaintance at the meeting next spring.

Again with best wishes and heartiest sympathy,

Believe me,

Very sincerely yours,

JAMES L. MAXWELL.

C. M. MISSIONARY ASSOCIATION.

(KULING BRANCH.)

SEASON, 1906.

*From July 3rd to August 28th. Meetings to be held
on Tuesdays.*Little things that have helped
me.....Dr. O. S. LOGAN.Problem of Hospital and Dis-
pensary Assistants.....Dr. S. R. HODGE.Leprosy, with diagrams, photo-
graphs and specimens.....Dr. FOWLER.Massage.....Dr. E. D. VANDERBURGH.
Better Sanitation for Native
Cities, Towns, etc.

Dr. C. W. SOMERVILLE.

Subject to be announced. Dr. P. L. McALL.

Discussion on Treatment of
Acute Opium Poisoning

Dr. S. COCHRAN.

Problem of Hospital and Dis-
pensary Construction in

China.....Dr. WOODWARD.

How to prevent or manage
difficult labour....Dr. W. A. TATCHELL.

Personal Record.

BIRTHS.At Yangchow, 5th May, to Dr. and Mrs. P. S. EVANS, Jr., S. B. C.,
a son (Frank).At Changteh, Hunan, May 29th, to Dr. and Mrs. O. T. LOGAN, a son
(Tracy Harrison).



The China Medical Missionary Journal.

VOL. XX.

SEPTEMBER, 1906.

No. 5.

Original Communications.

[All papers must be in the hands of the Editors two months before date of publication to insure their appearance in the following number. The editors cannot undertake to return manuscripts which are sent to them. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

AN UNDESCRIBED FORM OF ASCARIS AND ITS EGG. IS IT A NEW SPECIES?

By O. T. LOGAN, M.D.

I beg to call attention to a worm and its egg, that so far as I can find out, is not described in the books. My apology for this article is that for nearly two years the egg has been repeatedly seen in feces examined, sometimes associated with other eggs and at other times in what we might call pure culture so far as eggs are considered, and that I have lately had unique opportunities for the study of the subject. This worm has caused trouble in my own family, on one occasion marring the happiness of our little girl while we were at Kuling. Parasites cause her, as they do some other children, to be exceedingly fretful and usually cause her also to have pimples or boils. This egg was noticed in her feces last July. If I remember correctly one dose of *santonin* was given, but without result. As the egg was unlike that of the lumbricoid we did not continue the *santonin*, but after consulting two medical friends, one of whom had had a course in tropical medicine, we treated her for pin worms, but without result. These friends had no solution of the problem unless it might be the oxyuris, which the authorities tell us seldom passes its egg in the feces. In consideration of the importance of the detection and

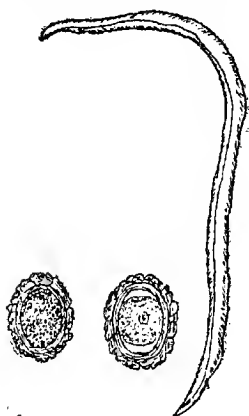
EMBRYO INSIDE
EGG.



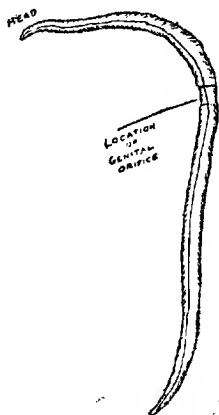
EMBRYO BURSTING
OF EGG.



treatment of intestinal parasites, and after being assured by Dr. Boone that such a paper would be acceptable, I have decided to offer it for this important meeting. These parasites are capable of causing symptoms that are troublesome and even severe, and I especially hope that I may clear up at least the practical part of the subject for my two friends mentioned and others who may be willing to do the simple but somewhat disagreeable work of fecal examination. I have learned, to my surprise, that there are medical missionaries who are willing on the plea



ASCARIS LUMBRICOIDES
AND EGGS (V. JAKSCH)
E. P. 1, Obj. B A. Reichert.
[About 700 diameters].



ASCARIS "x"
SHOWING CONSTRICTION.

of "too busy" or "too much trouble" or "can't afford a microscope" to treat diseases on suspicion when positive evidence is easily at hand by the use of the microscope, the only consultant many of us have. I am not intending to say that we should examine every case suspected of harboring worms, in dispensary or even in hospital practice, but for the cases that worry us, the microscope is often a great economic factor, whether we consider ourselves, our patient, or our drug supply. I could cite many instances, if time allowed, in support of this statement. When it comes to treating his own family or the families of other missionaries, and especially children—those little, too often delicate exotics—how a medical missionary can dispense with a microscope in these days of enlightenment is beyond me. His victims are sure of two things, even if the doctor is sure of nothing; they will get cinchonism by *quinine* to

drive out suspected malaria and *santonin*, *ad nauseam* to expel worms that are in many cases not present. If his patient does not improve in spite of him, he will awake after a variable length of time, to the fact that something else is the trouble, and that he has handicapped his patient where he should have helped. If this shoe fits any brother present, I beg of him to get a microscope on the instalment plan and pay for it with drugs he has formerly worse than wasted; that he will get to work in spare moments, like many of us have done who were inadequately instructed in college, and with a book on tropical diseases get abreast of the times on at least two subjects that affect our usefulness tremendously, viz., malaria and intestinal parasites. All this is parenthetical, and I beg pardon for riding my hobby away from my text, a privilege usually allowed only our clerical brethren.

The morphology of the egg in question, which we will for convenience style the "x egg," is readily seen by the specimens I have asked Dr. Graham kindly to prepare, and by the photo-micrographs which poorly represent the specimens, being prepared with an improvised outfit. The egg is narrower, but somewhat longer than that of the *ascaris lumbricoides*; it is invariably elliptical, has a much thinner shell than the lumbricoid egg and has very little of the albuminous coating of that egg. The yolk of the "x egg" resembles, to my eye, fat globules, though not so regular as these.

Last fall two brothers were admitted to the hospital. One had the egg of the lumbricoid and the other the "x egg" in the feces. *Santonin* and *calomel* in tablet form were administered to both and the lumbricoid patient passed numerous worms, while the "x egg" patient passed none. Remembering our child's case I was becoming more convinced that this "x worm" was not to be expelled by *santonin*. This was a wrong conclusion, as we shall see later. O the pitfalls of original research! Puzzled but not daunted, I sought more light, and got it from a near but unexpected source. Examining my own stool several successive days, I found this egg in every specimen unassociated with any other form of ova. I took *santonin* and *calomel* tablets made by a well-known English firm, and found the *santonin* tablets in the chamber next morning exactly as they were swallowed. O the unexpected discoveries in original research! I am now convinced that *santonin* should be used not as bullets, that an *ascaris* might knock herself insensible against, but as powder, the smell or taste of which will make her sick of her abode. I repeated the dose in powdered form two successive nights and was rewarded the third morning by finding a nine inch worm, answering the description, so far as I could make out—I am

not an helmiuthologist,—of the ordinary female *ascaris lumbricoides*, excepting that there is a constriction about one-sixth of an inch wide which encircles the body at the junction of the middle and anterior thirds. O the reward of original research!

In the books at my command I find no mention of such a constriction on the lumbricoid worm. I have sent this worm with a specimen of the feces to the professor of the Chair of Tropical Medicine, U. S. Navy Medical School, and I trust in due time to have the opinion of an experienced helminthologist and to report his findings later.

After my success the same egg was found in the stools of two other members of our mission and the treatment brought the same result, but the worms were smaller. In the three cases no males were passed and the eggs disappeared with the exit of the single worm. I am sending one of these worms to be presented for consideration with this paper.

Intent on finding out what I could, I dissected on December 17th two of these "x worms" passed by a patient and found that ninety-nine per cent. of the eggs in the oviduct were elliptical without a visible shell, but one per cent.—the percentage is only approximate—were oval shaped, identical with the ordinary lumbricoid egg. The same day I dissected a non-constricted worm and found none of the elliptical eggs, but only the classical *a. lumb.* This patient passed twelve worms, five of which were males. The feces showed both forms of eggs in abundance. A few days later, in dissecting, I found that three out of four of the "x worms" contained eggs similar to those of the *ascaris lumb.* O the contradictions in original research! After this I ended my dissections, for the present at least. Examination of feces is pastime compared to the dissection of worms, as they give out an exceedingly offensive odor peculiar to their loathsome selves. I found, for the first time, in the non-constricted worm in the small part of the oviduct a good many elliptical eggs, but in the large part—that nearest the genital orifice—all the eggs were those of the *ascaris lumb.* In the non-constricted worm I have not observed in the large part of the oviduct a single elliptical egg. At this last dissection, studying a ten-inch constricted worm, I found that in the oviduct nearest the genital orifice seventy-five per cent. of the eggs were elliptical and without a visible shell. Further inward, the large part of the oviduct contained ninety per cent. while at the beginning of the small part the percentage was the same, and in the middle of the small part of the oviduct fifty per cent. were estimated to be elliptical; the balance in each case being the same form as the *a. lumb.* egg. This

patient passed three male worms and four non-constricted and nine constricted females. The feces showed both eggs in abundance.

An interesting question constantly recurs to me, viz., Is there any way to detect the presence of a male worm from the examination of the stool? I have found the male generative organs packed with spermatozoa, which appear as round collections of sand-like particles without any visible limiting membrane. These hodies are about four times the size of blood cells. I have not been able to demonstrate their presence inside the female, and think it would be much more difficult to find them in the feces supposing that they are thus passed. This is a practical problem, as we have seen that the males in some instances are almost as numerous as the females.

CONCLUSIONS.

1. This may be a new variety of ascaris. If the literature on the subject bears us out that the ascaris lumb. does not possess this constriction, it may be that this "x worm" is worthy of a new name. There may be other differences a helminthologist would detect. Of one thing I am sure, after examining dozens of worms, that many of them do not show the slightest suggestion of a constriction at the place mentioned. This constriction is usually plainest on the large worm, but I recall a female lumbricoid twelve inches long that showed no constriction whatever. There appears, from notes on dissection, a tolerably constant relation between the "x egg" and the constricted worm, although this relation is not absolute. In no instance has the elliptical egg been found in the oviduct of the non-constricted worm near the genital orifice. All these points have, to my mind, some weight in favor of this being a new species.

2. This "x egg" may be that of the female that has not recently met the male. This must have been the case in three instances mentioned above where but one female was expelled. But in the case where five out of the twelve worms were males it would seem that the conditions were most propitious for fertilization, and yet the "x eggs" were present in abundance. It remains to be seen whether the "x egg" will hatch or not, and I hope to settle this point by incubation within the next few months.

Before closing I must say that in examining the male worms all of them were identical so far as I could see. None of them showed any constriction. If we find that we are dealing with a new variety more critical study of the males will need to be made. This paper has already gone beyond the limits intended by the writer. If my brethren have

been bored I will console them by saying that where they have been bored minutes, I have worked and thought and insulted my olfactory hours, endeavoring first to solve the practical side and then to shed a little light on the scientific aspect. O the fag of the novice in original research!

LATER OBSERVATIONS ON THE ATYPICAL ASCARIS EGG.

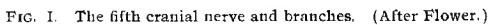
The above was written in January, 1905. Since that time I have seen many more specimens containing this egg. I have been fortunate enough to find, altogether, six cases in Europeans where the stool showed only the atypical egg and have been able to study the cases in a way that leaves practically no doubt as to the sort of worm that produced this peculiar egg. Five of these cases passed a single female and one passed two females, and after the worms were expelled the eggs disappeared. Dr. H. B. Taylor has told me of a case he treated, that showed only the atypical eggs in the stool, and a single female was passed whose uterus was full of the elongated delicate eggs.

The conclusion I am forced to is this: that the atypical egg is produced by the female worm that has (not, Ed.) had access to the male or that has not had sufficient intercourse with the male worm to fertilize all the eggs. Having found in the dissection of some females that the typical and atypical eggs lay side by side, I conclude that some were fertilized and some were not.

The article is well drawn out and may seem to some of little practical value, but it seems to me that since I have seen troublesome nervous symptoms caused by a single worm in a child, and since it has been shown that these worms are capable of penetrating the bowel and migrating to vital parts—one of my patients passed a live worm through his urethra—that we cannot be indifferent to the study and recognition of these round worms. The burden on the heart of the writer has been to help his brethren to recognize the atypical egg and to tell them that the worm, whatever its difference from *ascaris lumbricoides*, is easily expelled by *santonin*.

Dr. Ch. Wardell Stiles, of Washington, has called my attention to an article* by Wellman, of Africa, evidently a scientific man and a keen observer. He finds the same egg in Africa and also the constricted worm, which he thinks may be a new species. His observations antedate mine by nearly a year, although I had not seen his article until recently.

**New York Medical Journal*, July to September, 1905. (I have not the papers with me now, being away from my station.)



THE VARIOUS FORMS OF FACIAL NEURALGIA: THEIR
DIAGNOSIS AND TREATMENT.*

By Rev. W. ARTHUR TATCHELL, M.R.C.S., L.R.C.P.

Facial neuralgia is one of the most common and interesting diseases within the realm of medicine and surgery. And yet hitherto its importance has been neglected. Very few of us during this transitory life escape a visitation. Its treatment has generally been of a domestic character, or else by one of the innumerable quack remedies advertised on the covers of magazines. It is only during recent years that the art of medicine and the science of surgery have recognised the importance of the various aspects of the disease and treated it accordingly.

My desire is to classify the various forms of facial neuralgia according to the latest research, and to consider their treatment, with special reference to the operation, which must be recorded as one of the modern triumphs of surgery.

Surgery has been defined by Sir F. Treves as "an accurate knowledge of anatomy, plus common sense," so I would ask your indulgence to consider a few anatomical facts. The principal nerve involved in facial neuralgia is the fifth, or trigeminal nerve. (See Fig. 1.) It is the largest cranial nerve, and resembles a spinal nerve, (1) in arising by two roots, (2) in its function, and (3) by having a ganglion developed on its posterior root. Its deep origin we need not dwell upon. It forms the great sensory nerve to the face and head, whilst the motor fibres supply the muscles of mastication. Furthermore, it contains fibres to blood vessels—principally dilators—and is said to be trophic.

Two of the three main branches are entirely sensory, the third being mixed in function. The two roots emerge through an opening in the dura mater on the petrous portion of the temporal bone, and lie on the bone enveloped by dura mater in their course to the apex of the petrous portion of the temporal bone. Near to this apex and in a slight depression lies the great Gasserian ganglion. The smaller motor root passes behind the ganglion and is quite independent, as it does not unite with the sensory root until both roots have passed outside the cranium, where it blends with the third branch or inferior maxillary nerve.

The Gasserian ganglion is of interest. It was first recognised by a Viennese anatomist, Raimund Balthasar Hirsch, in 1765, who named it after his otherwise unknown teacher, Gasser.

* Read before the Central China Medical Missionary Association on May 23rd, 1906.

The ganglion is irregular in shape, being rather crescentic. The large superficial petrosal nerve lies on its under surface, and it also receives filaments from the sympathetic. From its anterior surface emerge the three important branches :—

- (I). Ophthalmic.
- (II). Superior Maxillary.
- (III). Inferior Maxillary.

Also a few minute branches to the dura mater and tentorium cerebelli.

Now, just a few remarks about these branches.

(I). *The Ophthalmic.*

This is a sensory and the smallest branch. It distributes branches which supply the eye-ball, lachrymal gland, mucous membrane of the nose and eye, the eye-brow, forehead and nose. Just before entering the orbit through the sphenoidal fissure, it divides into the lachrymal, frontal and nasal.

(II). *The Superior Maxillary.*

This branch is next in size and also sensory in function. It passes through the foramen rotundum, crosses the spheno-maxillary fossa, enters the orbit through the spheno maxillary foramen, ultimately appearing on the face through the infra-orbital canal. Here it divides into numerous branches, which are distributed to the side of the nose, lower eye-lid and upper lip, uniting with branches of the facial nerve. (See Figs. 1 and 2.)

(III). *The Inferior Maxillary.*

This is the mixed and also the largest branch. It leaves the cranium by passing through the foramen ovale and, outside the skull, divides into anterior and posterior trunks. The recurrent meningeal branch and the nerve to the internal pterygoid muscle are given off just before the nerve divides. (See Figs. 1 and 2.)

Before leaving the anatomical details of our subject I would like to refer to the four small ganglia connected with the above nerves.

(1). *The Lenticular Ganglion* (see Fig. 1) is connected with the ophthalmic nerve. It has three roots, and communicates with the nasal nerve, the motor oculi nerve, and the sympathetic.

(2). *The Spheno Palatine or Meckel's Ganglion* is connected with the superior maxillary nerve, which forms its sensory root, and communicates with the facial nerve through the superior petrosal nerve to form its motor branch.

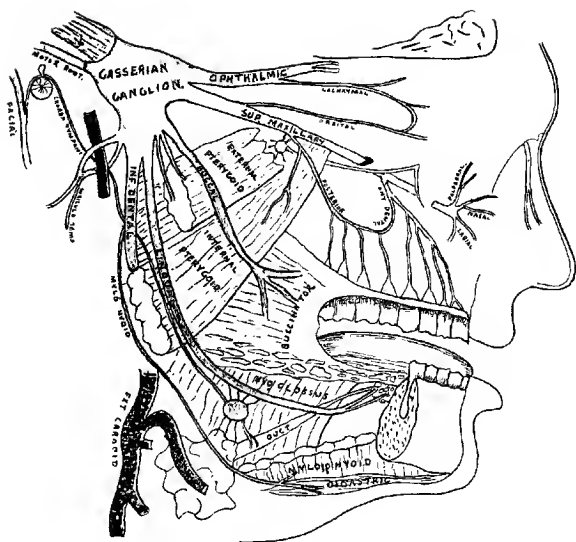


FIG. II. Medium antero posterior section of head, showing distribution of second and third division of fifth nerve. (After Gray.)

(3). *The Otic Ganglion* is connected with the inferior maxillary nerve by the branch to the internal pterygoid muscle; with the facial and glosso pharyngeal nerves through the superficial petrosal nerve; with the auriculo temporal nerve through the glosso pharyngeal nerve; and also with the sympathetic.

(4). *The Submaxillary Ganglion* is connected with the lingual and facial nerves through the chorda tympani. It also communicates with the sympathetic. Thus we note that all these ganglia have a sensory motor and sympathetic communication.

With this brief survey and revision of anatomy, without which knowledge it would be impossible to understand our further consideration of facial neuralgia, let us pass on to define the meaning of neuralgia. It is a localised pain along the course of a peripheral nerve or nerve root, without any local signs, either of inflammation or disease. Strictly speaking it is never a disease, but only a symptom which would involve the services of all our recently created specialists.

I would like to classify the various forms of neuralgia into four main groups:—

I. Neuralgias, which are the symptoms arising from neurasthenia, hysteria, auæmia, malaria, syphilis and so forth.

II. Neuralgias, which are true visceral referred pains, due to disease of some organ *of the head*, membrane or tissue surrounding some organ, or implication of a nerve or nerve twig, and those due to some organ *in the body*, the pain being referred to the face and head as a direct consequence.

III. Neuralgias due to *tumours*, etc., of the head involving the fifth nerve.

IV. Neuralgia quinti major or epileptiform neuralgia.

Let us consider these seriatim.

The subjects belonging to the first group are very numerous. The neuralgia of the face or head is a symptom of greater or less severity, an indication of a specific disease which we ought to diagnose and treat. To enter into the details connected with these various causes, is quite outside the object of this paper. *Sublata causa, tollitur effectus.*

It is only within recent years that the second group of causes has been distinguished. We are indebted principally to Professor Henry Head for our present knowledge on referred visceral pain. He tells us "that any organ in the thorax or abdomen may, under favourable conditions, cause referred visceral pain to the head." This pain is associated with

superficial tenderness over certain areas of the scalp. These areas of the head are segmentally associated with those on the body and are thus indirectly in relation with any particular organ in the body.

The following table, prepared by Dr. Henry Head, shows the areas on the scalp which are connected with the areas on the trunk, also the organs in particular relation with these areas :—

ASSOCIATED AREAS ON SCALP.	AREA OF BODY.	ORGANS IN PARTICULAR RELATION WITH THESE AREAS.
Frontal-nasal ...	Cerv. 3	Apices of lungs, stomach, liver.
Mid-"-orbital ...	" 4	Aortic orifice ?)
" " " ...	Dorsal 2	Lung, heart, (vents.) ascending arch of aorta.
" " " ...	" 3	" " " arch of aorta.
" " " ...	" 4	" " " (occasionally).
Fronto-temporal ...	" 5	Lower lobe of the lungs, heart (auricles).
" " " ...	" 6	Bases of lungs, heart (auricles) stomach
Temporal " ...	" 7	(cardiac end).
Vertical ...	" 8	Stomach liver, small intest. (upper part).
Parietal ...	" 9	" (pyloric end) small intestines
" " " ...	" 10	(upper part).
Occipital ...	" 10	Liver, intestines, ovaries, testes, stomach?
None ...	" 11	Intestine, Fallopian tubes, uterus.
" " " ...	" 12	Intestine (colon) uterus.

Dr. Head remarks that the pain and tenderness of the scalp, "varies greatly" and sometimes the patient, with some visceral disease, is not aware of any tenderness of the scalp until examined.

The other portion of this group only differs from the first by the location of the cause. These include carious teeth, the pain of which almost everyone can speak from personal experience. This neuralgia is diffuse and often paroxysmal in character. Then there are eye strain, hypermetropia, presbyopia or astigmatism, iritis and glaucoma. The neuralgic symptoms from these causes are generally frontal and temporal. With glaucoma, besides the neuralgia, there is frequently vomiting, which may be mistaken for some gastric disturbance.

Inflammation and suppuration of the air sinuses in the skull forms another cause. The neuralgia in these cases is of a throbbing character. Further, there are diseases of the ear, tongue and nose. Syphilitic nodes and periostitis of the skull and even intra-cranial gummata, go to increase the list of causes. In these, as in others, the neuralgia is but a symptom, the result of either pressure, chemical toxin, or micro-organism.

Group three can be quickly considered. Tumours in the cranium are not common.

Dr. H. Head reports a case of a chondro-sarcoma growing from the apex of the petrous bone and causing neuralgia.

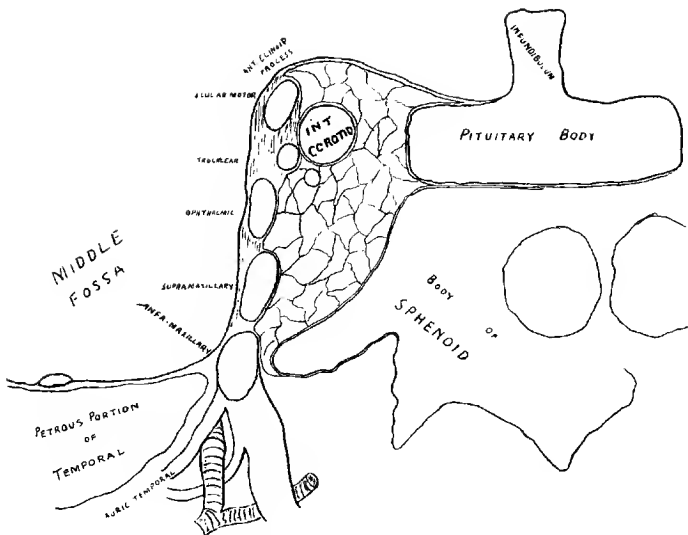


FIG. III. Transverse section through cavernous sinus, showing relation of vessel and nerves.

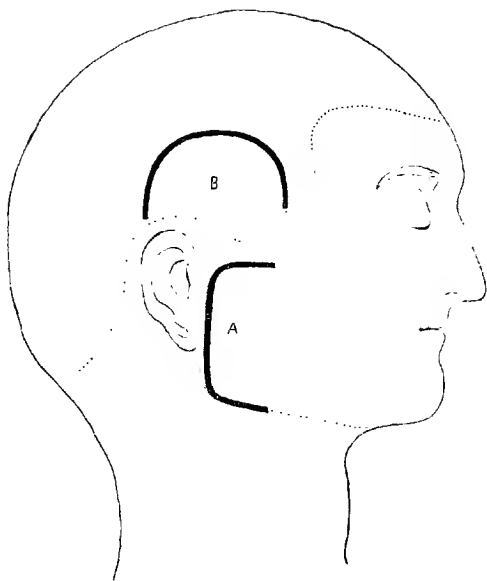


FIG. IV. Position of incisions for A, Rose's pterygoid; and B, temporal incisions

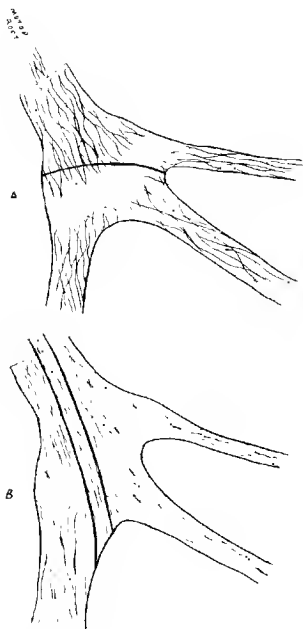


FIG. V. A, anterior and B, posterior aspect of gasserian ganglion. In A is seen the line of incision in the operation of partial extirpation, sparing the ophthalmic division.

Kosinski also reports a case which was diagnosed "osteosarcoma, in a woman, emanating from the Gasserian ganglion itself." It could be felt in the right nasal cavity, and at the autopsy it was found to be connected with the sella-turcica, sphenoidal sinus and anterior lacerated foramen. You will, I think, agree with me that with our present knowledge of pathology it is inconceivable that an osteosarcoma could possibly start from the Gasserian ganglion.

Mr. Johnathan Hutchinson, Jr., also reports a case of osteosarcoma.

In 1849, Dr. R. W. Smith published a "Monograph on Neuroma," which was reproduced by the New Sydenham Society in 1898. In this he reports an unusual but undoubted case of true mixed celled sarcoma, or as he termed it "neuroma," implicating the Gasserian ganglion.

Five cases have been published of sarcoma of the dura mater, including an endothelioma invading the Gasserian ganglion. In all these cases there was not only neuralgia but certain degrees of anesthesia. Further, the oculo motor nerves had become involved and also the orbital circulation, causing proptosis.

These signs and symptoms are sufficient to differentiate this group of cases from the following important one.

IV. Neuralgia Quinti Major or Epileptiform Neuralgia. This has been wrongly termed tic douloureux. At its onset it generally simulates a simple neuralgia, belonging to one of the other groups, but as it advances, as it inevitably does and must, and when all medical and even minor surgical treatment has been tried and has failed, this terrible disease is diagnosed. The hideous clinical picture which a poor sufferer presents can never be forgotten when once observed. To help us to form an *early* diagnosis I would suggest the following characteristic features of the disease:—

(a). Always during the latter half of life. Generally between the age of thirty-five and sixty.

(b). Males are subject to it more than females.

(c). The onset is spasmodic, increasing in severity, the intervals of perfect freedom becoming shorter as the disease advances.

(d). Spontaneous cure is unknown.

(e). Medical treatment is useless, although *morphia* will give temporary relief, as it will for any other pain. (This is probably why we do not see many cases out here. I have only seen one).

(f). Minor surgical treatment—neurectomy, neurotomy, etc., will at times give temporary relief.

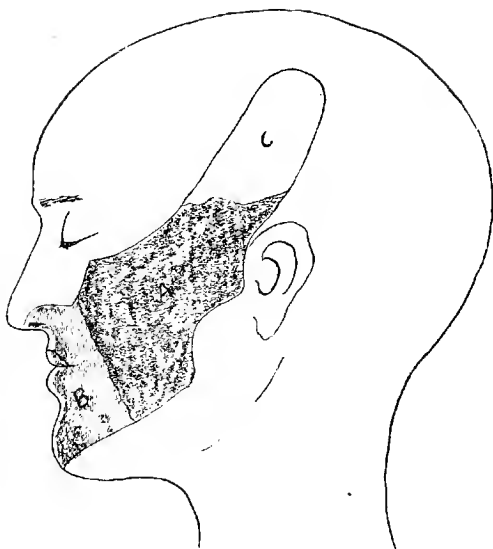


FIG. VII. Anesthetic area left after removal of second and third divisions of fifth nerve. A, complete; B, incomplete; C, slight.

foramen ovale. One must remember that the position of this sometimes varies. Pressure for a few minutes will arrest the hæmorrhage at this stage. The difficulties increase as we progress. To find and expose the Gasserian ganglion is not always an easy task. You must follow along the two main nerve trunks, carefully detaching the dura mater in an upward and backward direction. Frequently it is necessary to tie and divide the middle meningeal artery. Should the ligature slip, which it often does, then plug the foramen spinosum with a spicule of bone. If the hæmorrhage is great, pressure may be necessary and the completion of the operation postponed. When the ganglion is clearly exposed, then take up the tenotome and with it divide the inferior and superior maxillary branches near to the ganglion (Fig. V A). Pick up the ganglion with toothed forceps and divide it high up, leaving the ophthalmic division intact (Fig. V A). Do not trouble about the oozing which always occurs at this stage. It will cease. Drop down the temporo-sphenoidal lobe, replace the flap of scalp and sew in its original place, leaving a small tube in one corner to drain. Take this out next day.

The wound ought to heal by "first intention" and the patient will awaken and be absolutely free from pain. The after-treatment is the same as for any other head operation. On the second or third day the patient may get up, and may leave the hospital in ten to fourteen days.

Mr. J. Hutchinson concludes his discussion on this subject by saying:—

"If the neuralgia be limited to the infraorbital branches, resection of the nerve by following back the canal in the orbital floor may be tried. If the neuralgia concern also the palatine branches, intracranial resection of the superior maxillary trunk should be carried out. If the inferior dental nerve be alone affected, it should be resected through a trephine aperture in the outer table of the lower jaw. When the neuralgia concerns several branches of the inferior maxillary division (e.g., inferior dental and the auriculo-temporal), intracranial resection of the trunk and adjacent part of the Gasserian ganglion is indicated.

"For all other cases, those in which the neuralgia has already invaded two of the main divisions of the fifth nerve, the major operation on the ganglion should be carried out, as affording the only hope of permanent cure."

Results and Complications.

Cutaneous anesthesia depends on whether the whole or part of the Gasserian ganglion is removed.

If the ophthalmic branch is alone spared, the forehead, greater part of nose, upper eyelid, cornea and conjunctiva will not lose sensation, (Figs. VI and VII). But we shall have *complete* anesthesia of the mucous membrane on inner surface of lips, gums, hard and soft palate, also eustachian tube; *incomplete* anesthesia on anterior two-thirds of tongue (chorda tympani) and pharyngeal vault. These areas of anesthesia no doubt diminish in time.

There is no marked inconvenience due to paralysis of masticatory muscles.

The sense of taste is unaffected on the posterior portion of the tongue and never completely affected on the anterior two-thirds.

Neuro-paralytic keratitis is a real and serious complication, with complete extirpation of the ganglion; but is avoided by leaving the ophthalmic branch intact.

There are three main risks to the operation, i.e., shock, hæmorrhage, sepsis; and so there are to almost every other operation, whose results are not so beneficial.

“FROM OUR CHINESE MEDICAL PORTFOLIO.”*

In the study of old classical medicine in China we have found a row of pictures which surely will also awaken the interest of our friends. We give them here with a few words of explanation.

The first shows Shan-nung with the surname of Keung, who is the father of agriculture. He is supposed to have ascended the Chinese throne in the year 2737 B. C. In his day the dwellers on earth still dressed in palm leaves and straw, as one sees them in many old Chinese prints. He constructed the plow and rake and introduced the planting of the five cereals. He tried the taste of various grasses and healing herbs and investigated their nature, whether their effect was mild, quieting, heating or cooling.

The story is told of him that he had such a thin wall to his stomach that he was able to look through it, as if it were made of glass. And people therefore declare that he had a glass stomach. One day he took seventy different kinds of poison and watched their effect through the glass walls of his stomach, and immediately sought the right antidotes to counteract them. The book on pharmacy used to-day

*From the appendix to the Report for 1905 of the Tungkun Hospital. Translated from the German by Edith Hubbard.

ILLUSTRATIONS FROM THE CHINESE STANDARD WORK ON SURGERY.



CARBUNCLE OF THE THIGH.



SCROFULOUS GLANDS IN THE NECK.



ULCER BEHIND THE EAR.



MUMPS.



SHAN NUNG, THE FATHER OF MEDICINE,
2737 BEFORE CHRIST.



WONG TAI, AUTHOR OF THE STANDARD WORK
ON MEDICINE, 2697 BEFORE CHRIST.



STALACTITES USED IN SYPHILIS.



TSO MA USED IN JAUNDICE, TSUK
TSIK USED IN CYSTITIS.



THE SKIN OF THE ELEPHANT
IS PULVERISED AND SPRINKLED
ON WOUNDS.



UI HEUNG USED IN CASE OF HERNIA.

throughout China is supposed to have been written by him, and has appeared in many improved and enlarged editions. It is called "Shan-nung-pun-t'so," "the native healing herbs of Shau-nung."

The Pictures* opposite are taken from one of these improved editions of sixteen volumes, which also contains information about the healing properties of minerals and animals.

The follower of this mythical hero is the much more enlightened Wong T'ai, who was so gifted that at the age of ten he began to teach others. In 2697 B. C. he ascended the Dragon Throne, and as Regent accomplished a great deal. He made the calendar, introduced mathematics and music, started the cultivation of the silkworm, originated the use of clothes, the bow and arrow, carriages and ships, and all kinds of implements. He is also the true father of medicine; and his huge twelve-volume work on "internal diseases," Wong-tai-noi-king, is the foundation of Chinese medical study of to-day. He taught that the use of alcohol shortened men's lives and "discovered" the system of the blood vessels which, though false, is believed and taught by the Chinese to-day.

The first three pictures give a front, back, and side view of the human body, showing the respiratory and blood vessel systems. Every single one is described from start to finish. The last picture illustrates the twelve intestines of the Chinese school and explains their use. The corresponding Chinese text points out distinctly that the diagrams show the teaching of the Wong-tai-noi-king, and warns the pupils not to forget this.

The saying is of Wong T'ai, that he never died, but ascended into heaven.

The way the Chinese represent external disease is shown in four pictures given here (No. v.), which are taken from an eleven-volume medical kodex. They speak for themselves.

The last picture deserves even greater interest and introduces us to the great Chinese surgeon Wa T'o. He lived in the time of the latter Han dynasty (221-264 A. D.), and was most illustrious in his profession. He used an anesthetic before operating, a decoction of Indian hemp, and an alcoholic drink, through which painlessness was secured. Then, for instance, he cut open the stomach or bowels, took away the diseased part, cleansed it thoroughly and sewed it up again. He then put an excellent ointment on the wound, so that in five days it was healed. After only a month "a great peace reigned" in the body of the patient.

Our picture shows the surgeon operating upon a brave warrior. This hero is no insignificant person; he is Kwan T'ai, who was later

* The four pictures given here are traced back to him.

exalted as a god of war by Chinese emperors, and in his honor temples are erected in all the district towns and in Tungkun. As the present Emperor came back in 1901 to his capital city, Peking, after the troubles, his first act was to take an offering to the temple of Kwan T'ai.

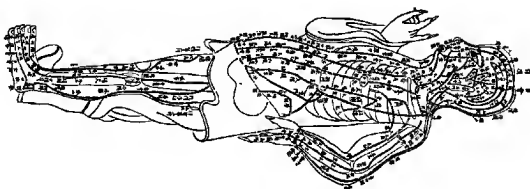
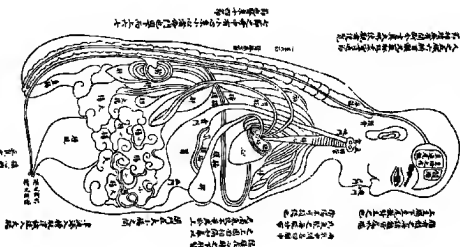
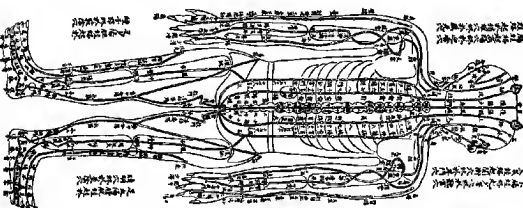
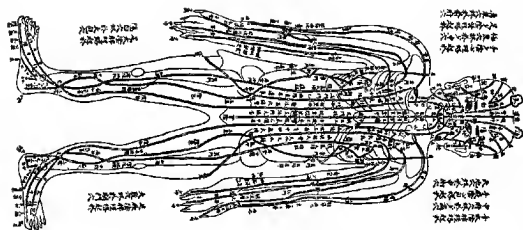
The story is told that when this "god" still lived upon earth, he was shot one day in battle by a poisoned arrow. The wound festered and would not heal for a long time; at last it healed, but it still always hurt him when it rained. Then the surgeon Wa T'o said to him: "The poison is working at the bone. The arm must be cut open, the bone scraped and the wound cleansed. Then I shall sew it up with medicated thread, the trouble will be relieved and you will never have any more pain." Kwan T'ai did not hesitate, but urged the doctor to operate immediately. He would not even let a friend who was drinking wine with him go. The blood flowed in streams from his arm, so that it filled a whole goblet. The sight filled his friend with fear, but Kwan T'ai drank quietly on and told his friend many witticisms, while the doctor cut and burned. According to another account he is said to have played a game of chess to divert his thoughts. At any rate he was very brave, so that even Wa T'o exclaimed as it was over, "Truly, you are a heavenly spirit!" Sad to say, a tragic fate awaited the great surgeon, which alas! was shared by his writings. A general named Zao Zao suffered much from headaches and had often consulted Wa T'o. As the disease after a while did not answer to former treatment the doctor advised an operation; he was to open the skull, so that he could remove the cause of the trouble. This was looked upon as an attempt on the life of the famous general. Wa T'o was first thrown into prison and then sentenced to death. Before he died this martyr gave all his manuscripts on disease and the healing of man and beast to his jailor, who had always shown himself friendly. The jailor entrusted his wife with the gift, which he valued highly and through which he expected to become wealthy. As the fateful day approached, the woman, fearing lest her husband through following Wa T'o's teaching might meet a like fate, threw all the works into the fire. The jailor on returning, was only able to save one, that on the healing of animals. It is said that this is the only veterinary book the Chinese have to-day.

Perhaps the tyrannical overthrow of this great man gave a death blow to all Chinese medicine. Since then, at least, we read no more of operations, and even to-day the doctors of the classical school in China deem it beneath them to use surgery. Truly their glory is over! The Chinese operates no more; he only lets himself be operated upon by foreign devils and their accomplices!



KWAN TAI, THE CHINESE MILITARY IDOL, IS BEING OPERATED ON FOR NECROSIS OF THE ELBOW. DURING THE OPERATION HE IS QUIETLY CONVERSING WITH A FRIEND. THE SURGEON IS THE WELL-KNOWN WA TO, 221-254 AFTER CHRIST.

側人明堂圖 肺明堂圖 快人明堂圖 入正明堂圖 明堂圖



"TREATMENT OF MAD DOG BITE."

By J. G. CORMACK, M.D.

Our active, energetic editor was good enough to say in the last issue of the JOURNAL that we might find among the native remedies something that would be of value, but I fear the search will be like that for the proverbial needle in a hay stack, or to vary the metaphor, for grains of wheat amid tons of chaff.

As a sample of what is found in Chinese books on medicine and surgery I am sending you a translation on the treatment of mad dog bite; this I have taken from the Golden Mirror of Medicine, published under Imperial sanction. (御纂醫宗金鑑). The book, therefore, claims to be of a high standard, and it is illustrated with many line engravings, which are interesting and sometimes artistic. I have made several attempts to read the book but there is so much that is absolute rot in it that it is trying to one's patience to wade through it. Still, as the editor says, something may be added to our knowledge from the immense mass of materials that the native physicians have used during these centuries, and personally I should like to help in investigating the subject.

Some members of the Association may have collected a good list of the native books on medicine and surgery, and from these we can get the names of the drugs in use as well as the treatment of disease according to the most approved Chinese fashion. I should personally take it as a favour if anyone could send me such a list, or, for the benefit of all, it might be published in the JOURNAL.

THE TREATMENT OF MAD DOG BITE.

"The bite of a mad dog being exceedingly poisonous, needle, suck, roast with fæces, drip on urine, remove the single red hair from the crown of the head, and for three years avoid forbidden things, thus may life be preserved."

COMMENT AND EXPLANATION OF ABOVE EPITOME.

The dog owing to its "five viscera" (heart, liver, spleen, lungs and genitals) being infected with poison becomes mad.

Hence its bite is so injurious that nine men will die for every one that lives.

It is most urgent that when the bite is first inflicted the part should be needled so as to bring out the poisoned blood, and the person should fill his mouth with starchy water and suck the injured part (rice water

will do for starch) or the part may be pulled (*i.e.*, to express the blood) by the "*pulling method.*"

Another way is to wash the part with urine (better if it is that of a child), and having dried it, take a half walnut shell, fill it with human *fæces* and place it over the bitten spot, next scorch the shell with mugwort till the shell is burnt and the *fæces* dried; repeat this process 100 times, after which the 玉真散 powder, mixed well with spittle, should be applied to the bitten spot.

Next day the scorching process is to be gone through slowly three to five hundred times. At the beginning of the scorching process the *Fu-wei-san* (*i.e.*, assisting to scatter danger medicine) should be taken, so that the bad blood may be excreted in the urine. If the bad blood is retained and blocks the excretory organs (skin and kidneys) so that the urine is congealed and only passes in drops, then some "*Hu-peh-pih-ü-san*" mixture may be given to clear the blocked excretories.

The single red hair from the crown of the bitten person's head should be quickly removed. Then use powdered bean stalks and scented oil to make up a pill the size of a bullet. Put this pill continually on the bitten place, next open the pill and examine it, to find any fine dog hairs; if these are abundant it shows they belong to the poison which has thus been brought out. Take another pill and repeat this process; should no small hair be again present, stop; as the remedy has been efficacious.

From beginning to end the "forbidden things" must be avoided most carefully.

Till the end of life no dog flesh must be eaten, neither such things as silkworms (caterpillars) or red beans.

For 100 days linen (hemp) must not be looked upon, and no wine must be drunk. For three years all the poisonous things found in food must be avoided, and sexual relationship prohibited. Almonds should be continually taken as a preventive against the recurrence of the poison.

If means to save the person have been undertaken somewhat late, so that the poison has entered the man's heart, and he is greatly distressed, his stomach then swells and he foams at the mouth. Then tiger's head bones, tiger's teeth, tiger's cervical bones should be powdered and administered, mixed in two ounces of wine.

If the patient becomes delirious and his voice changes, so that it is like the barking of a dog, and the whites of his eyeballs are exposed, while he refuses the remedies and resists treatment, he cannot be saved.

The following are the prescriptions mentioned in the above treatment. The 玉真散 (Yü-jên-san) consist of the herbs

Iris Florentina (bitter root)	白芷	Gastrodia	天麻
Asparagus?	南星	Angelica Sp.	羌活
Aconitum?	白附子	Caraway seed	防風

One oz. of each, well mixed with spittle and blended to a thick paste, to be put on injured part.

Perhaps we fastidious Westerners may object to the compounding of drugs with spittle, and for their information I give the following couplet, which is said to be well known: 涎唾是个药, 处处用得著, which may be rendered, Saliva is a drug, which can be used on every part.

The other prescription, Hu-peh-pih-ti-san 琥珀碧玉散 consists of

Soap stone	滑石	6 oz.
Liquorice	甘草	1 oz.
Amber	琥珀	½ oz.
Dark colouring	青黛	q. s.

Mix to a fine powder. Dose, three-tenths of an oz. to be taken in *lamp wick soup*.

Another prescription, Fu-we-san 扶危散, consists of

Cantharides, or poison fly	蟞蟞	quantity as below:
Soap stone	滑石	1 oz.
Flowers of sulphur	雄黄	1/10 oz.
Musk	麝香	1/50 oz.

The cantharides is to be prescribed according to the number of days that have elapsed since the man was better, one for each day.

THE NEW METHODIST HOSPITAL, AT YEN-PING, FUH-KIEN.

By courtesy of Prof. C. M. LACEY SITES.

The Alden Speare Memorial Hospital is composed in reality of two buildings: the hospital proper, consisting of a central building and two wings; and back of this, separated by a space of twenty-five feet, is a second building containing chapel, dining-room and kitchens, with rooms upstairs for students, assistants and servants. All patients coming to the clinic enter at the rear of this building, as the principal road leads up to the back of the compound. The dispensary is located on the first floor of the central part of the hospital. Patients enter first a receiving-room, where tea is served to them; then wait in the chapel, where religious services are being carried on; and are thence admitted, one at a time, to the examining-room, where their cases are recorded and

prescriptions handed them to be filled by the student or assistant in the drug-room, or later attended to in the dressing-room. The operating and dressing rooms are lighted by a glass alcove, much like a conservatory, which, while protected from the sun, gives an abundance of light. In this central part is also the reception room for guests; also a drug store-room.

On the second floor of the central building are six wards corresponding to the rooms below. The wings are composed of a large ward and four private rooms on each floor. The front and ends of the hospital are protected by wide, open verandahs, the roof of which, opening from the second-floor rooms, is flat and protected by a railing,



ALDEN SPEARE MEMORIAL HOSPITAL.

making a beautiful place for recreation, fresh air and sunlight. One wing is set apart for women and children and a separate kitchen is provided for them. There is running water on tap in kitchens, bathrooms, operating, dressing and drug rooms.

The hospital has a frontal length of about 170 feet. It is located on an eminence in the very heart of the city of Yen-ping, and its gray brick walls and white verandahs give it an imposing and airy aspect. It was dedicated at Chinese New Year. Every high official in the city was present, from Taotai and prefect down, and all expressed warm appreciation of, and sympathy with, the good work done by Dr. J. E. Skinner, the superintendent.

Medical and Surgical Progress.

Medical.

Under the charge of KATE C. WOODHULL, M. D.

MECHANICAL VIBRATORY STIMULATION FOR THE GENERAL PRACTITIONER.*

As a means of dealing with chronic disease mechanical treatment is rapidly coming to the front. Of the mechanical measures used to-day in the treatment of chronic disease, electricity in its various forms and Mechanical Vibratory Stimulation are without doubt above all others, and to a physician who is desirous of making a special effort for office practice it would be well to make a comparison of these two modalities, as to their reliability and general availability in this work. Electricity has many enthusiastic admirers and adherents, who sound its praises for the cure of chronic disease, and it is true that a physician who desires to pay any special attention to chronic disease, to keep abreast with the times, should have a complete electrical equipment and a thorough knowledge of the technique necessary for the intelligent administration of electricity in all its forms.

The first thing, however, that strikes a physician who starts out to equip his office with electrical appliances is the amount of apparatus he must acquire and the necessary outlay it requires to get first-class goods. He who has had experience with electrical apparatus, I care not how much or how little, can testify that it is a constant worry to keep it in condition for daily use. To have an electrical outfit of any value necessitates that it include both the continuous and

interrupted currents, a static machine and an X-ray apparatus, and it will soon be manifest to the beginner that not only are these different forms of electricity indicated in different conditions, but frequently two or more are used in the same case to get the desired result.

I have about fifteen hundred dollars invested in electrical apparatus, and it has required from the very first from one hundred to three hundred dollars yearly to keep it in satisfactory running order; this, too, with years of experience in electricity, and using daily precautions to head off trouble. In addition to the great cost of keeping my electrical apparatus in order I have frequently been obliged to disappoint patients, not once, but many times during the periods of their treatments.

When we add a vibrator to our armamentarium the first cost is but nominal, and if we have a properly constructed machine there will be practically no after-expense. I have used a "Chattanooga" vibrator for three years, frequently as often as twenty times a day, and the total cost for wear and breakage in the entire time has been less than five dollars. With a vibrator we can get just as good results in all diseases and conditions that respond to electricity in its various forms, of course excepting those conditions which require the lights and electrolysis. We may also cure many diseases with vibration that will not respond to electricity. The more or less pain and shock which accompanies electrical treatment is quite a drawback to its use, as the laity, as a rule, are filled with dread at the mere mention of it as

* Read before the Fourth Councilor District of the Indian Medical Association at North Vernon, Indiana, October 26th, 1905.

a treatment, and this dread is often-times sufficient to make them hesitate before subjecting themselves to the treatment. In the use of Mechanical Vibratory Stimulation there is no shock, and when used by a careful operator it should not be productive of pain. It is a common testimony of patients that they gladly welcome each succeeding application of vibration for the feeling of well being that follows each judiciously given treatment.

The use of electricity requires all the way from five minutes to half an hour for a treatment; the time depending on the current used. Mechanical Vibratory Stimulation requires from three to ten minutes, never longer. Electricity must be used very carefully, if at all, around the sensitive regions of the very nervous. Mechanical Vibratory Stimulation can be used over the most sensitive area, and in small children can be used with no difficulty after the first treatment. Electricity is slow in its results, and this is annoying to both physician and patient. Mechanical Vibratory Stimulation is more rapid, certain and satisfying to physician and patient. This fact can well be illustrated by the following case in point: Four years since Mrs. T., aged fifty, suffering with general nervous disturbances, more or less constant, but sufficient to class her as a chronic invalid for over twenty years. She was distinctly one of a class of invalids very discouraging to the family physician, and not especially gratifying to the specialist. She had visited several sanitariums with little or no relief. I treated her for three months, giving her baths, massage, diet and electricity, using both continuous and interrupted currents and the static form. She returned home not as emphatically improved as I had hoped for, but at any rate considerably better than when she

came. This same patient came into my hands again this spring, having practically the same train of symptoms, possibly more exaggerated than she showed when I examined her four years previously. I again examined her and found that she had given up all hope of relief, and had only come back to satisfy the minds of her family. As before she was given baths and massage, but in place of electricity Mechanical Vibratory Stimulation was substituted. Vibration was applied to the spine and sensitive regions of the body daily for three weeks. After this she returned home and, according to her husband's testimony, is in better health than she has been in twenty years. This case began to improve and respond to the treatment at the end of the first week to such an extent that she could see it as well as myself.

If the use of Mechanical Vibratory Stimulation accomplishes no more than to make the general practitioner give a more thorough examination in his chronic cases, it will have done its share in defeating the quacks, charlatans, and patent medicine fakes. It has probably happened in the practice of each of us at least once that some chronic bearer of ill tidings informs us that some old chronic whom we have been meeting in our rounds has been cured by an osteopath or some other manual manipulator. Why is this possible? Simply because these manipulators are obliged to rely to a great extent on what they see, *i.e.*, the objective symptoms, and not the subjective symptoms. A case well illustrating this necessity of making a thorough investigation and examination occurred in my practice last spring. Five years ago Mr. M., aged sixty-five, clerk, very obese, complained of pain high up under the right scapula. Not giving him at that time the examination I

am accustomed to give since using Mechanical Vibratory Stimulation, I treated him for muscular rheumatism, basing my diagnosis upon the tongue, presence of pain in the back muscles, and the patient's testimony. In fact, he had been referred to me as a case of muscular rheumatism by a brother physician. I gave him daily hot air baths, interrupted current over back and legs, followed by the static waves with an electrode over the seat of pain. He remained under my care one week, and left because he dreaded the treatment more than the pain in his back. This man came again into my hands this spring, at which time he was only able to walk with the aid of a cane; he had great difficulty in rising from the sitting posture; he could not turn in bed or dress himself. Inside of ten minutes after he entered my office I had him stripped, lying flat on his face on a level operating table, and at once easily demonstrated, by inspection and palpation, a degree of muscular contraction beginning immediately under the lower border of the right scapula and extending down to the brim of the pelvis. The pyriformis muscle was tightly contracted, and there was great tenderness beginning at the notch and extending down the trunk of the sciatic nerve. I used Mechanical Vibratory Stimulation for fifteen treatments, extending over a period of thirty days, and discharged him entirely cured of the sciatica and lumbago. I have no doubt that the pain he had on his first visit to me several years ago was due to muscular contracture, with the resulting pressure on the nerve, and that this was the direct cause of the sciatica and lumbago present when he came to me last spring.

There is a scientific basis for treatment by Mechanical Vibratory Stimulation, and if the operator

knows his technique, anatomy, and physiology, and then makes a thorough examination of the causative factors in the case, he will be more than pleased with the results.

Pressure on a nerve causes it to vibrate, or in other words, increases its natural impulse. This vibration can be done by the hand, but manifestly any mechanical device that will localize this pressure would be far superior to the manual method such as is practiced by the osteopaths and other manual manipulators. Stimulation can be applied to a nerve by a mechanical vibrator, using a short stroke and light pressure for a short space of time. Inhibition of the normal function of a nerve can be secured by applying a long stroke accompanied by deep pressure if long continued. Muscular contracture can be overcome by using an inhibitory vibration over either the motor point of the muscle, or over the body of the muscle itself.

In applying Mechanical Vibratory Stimulation to the spinal interspaces we are able to reach both the posterior and anterior branches of the spinal nerves, the posterior branches by direct contact and the anterior branches through the mediation of the branches of the sympathetic system, the *rami-communicantes*. By thus applying vibration we are able to transmit the influence to all the organs supplied by the whole nervous system.

Mechanical Vibratory Stimulation is a system of treatment by which vibrations are imparted to the nerves or nerve centres. Applied over a muscle or over the soft tissues, it relieves tension, it modifies the blood and lymphatic circulation, and applied to a bone, such as the coccyx or the ribs, tends to restore them to their normal position, thus relieving any pressure they might have exerted as a result of their abnormal position.

Dizziness, tinnitus aurium, sick headache, asthma and hay fever are all benefitted, and, in some instances, cured, though they have baffled the family physician as well as the reputable specialists in the different lines. Vibration promises more in *tabes dorsalis* than any other method of treatment. I have seen cases who were unable to walk without a cane, in whom control of the bladder was gone and in whom the lightning pains were almost unbearable,—all cases of ten or more years standing,—after thirty days of this treatment, discard their cane, regain control of the bladder, and be entirely free from pain. Chronic constipation can be cured in every instance if there be not complete paralysis of the intestine. After having used vibration on a single case of sciatica one will always welcome these cases, as he can with the utmost assurance promise them relief. I have a tabulated list of over sixty cases of sciatica in my practice, all of whom, with the exception of one, I cured. This one I could not control, as he wanted a guarantee contract after he had taken the third treatment. Coccygodinia, a condition for which neither medicine or surgery promises much, can usually be relieved very promptly by vibration. Lumbago, the so called “stitch in the back,” which is usually due to muscular strain years before the onset, is in every instance relieved in from three to six treatments.

The *Medical Record* (New York, September 2) says editorially: “Dr. Russell has for some time been treating tuberculosis along the recognized lines of hypernutrition and fresh air and has met with a satisfactory measure of success in a class of patients to whom the sanitarium treatment is not available. Meeting, however, with certain cases of the apparently curable

type in which ill success attended his best efforts, he was driven to the conclusion that there was an unknown something lacking in the proscribed diet of proteids, hydrocarbons, and carbohydrates, the want of which retarded, or prevented the cure. This unknown something he was led to believe by some process of reasoning which the published report does not explain, to be vegetable juice. The lack was supplied by the addition to the diet of the expressed juice of all the vegetables in the market and also of apples and pineapple. This addition to the dietary is theoretically sound, and in accordance with a statement made by Fernie in his ‘Meals medicinal’ that the constitution of vegetable foods is altogether of a building up character, as distinguished from animal life, which involves excretions of the broken down products as part of its being.”

FRICITION OF THE SPINE FOR INTERMITTENT FEVER.

Dr. Alois Fenykovy communicates to a Vienna medical journal an account of some observations made on the treatment of intermittent fever by means of friction along the spine. Many years ago while at Nisch with his regiment, there occurred so many cases of intermittent fever that the stock of *quinine* was becoming exhausted, and, in order that the patients might not be without some kind of treatment, it was ordered that they should be rubbed twice a day along the spine with simple ointment. The day after this order was given, it appeared that the usual attack did not come on. Accordingly since that time Dr. Fenykovy has very frequently employed that treatment, and usually with marked success. Indeed, he says that three-fourths of his cases have done very well without any *quinine* at all.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

PLAGUE AND FLEAS.

The Indian Plague Commission are said to have definitely proved that rat fleas are the normal vehicle of infection in animals, and probably in man. This has been arrived at by showing that animals protected by fine wire gauze remain immune in plague-infected buildings, while unguarded controls contract the disease in large numbers. —*Journal of Tropical Medicine*, April 16th, 1906.

THE IMPORTANCE OF THE CORPUS LUTEUM (DISEASES OF THE OVARY.)

Stevens has carefully examined sections obtained from a large number of ovaries removed post-mortem from children in the pre-menstrual epoch, with a view to ascertaining the fate in them of the graafian follicle and ovum. He finds before menstruation is established that although the graafian follicle and ovum develop on the usual lines up to a certain point, retrogressive changes then appear, resulting in the destruction of the essential cells and their replacement by fibrous tissue. Consequently no corpus luteum is formed. Seeing that the only obvious difference between the ovary of the adult and child is the possession of a corpus luteum, the importance of this structure becomes strongly suggested.

Russell Andrews, in a critical review, sets forth the evidence accumulated as to the presence and site of production of an internal secretion in the ovary. That an internal secretion is produced is undoubted, and experimental work carried out by Fränkel points to the corpus luteum as the site of its production. As has just been noted, the

development of the sexual characteristics is coincident with the appearance of the corpus luteum. Further it is shown that destruction of this body causes the next menstrual period to be missed. If the corpus luteum be destroyed in early pregnancy, abortion is likely, whilst the loss of it, soon after impregnation, prevents pregnancy occurring at all. In short Fränkel regards the corpus luteum as a monthly gland having an internal secretion, which controls the nutrition of the uterus, is responsible for the menstrual function, and in some way modifies the nature of the endo-metrium, so that the ovum may successfully engraft itself on it. —*Medical Annual*, 1906.

THE ORGANISM OF RABIES.

Recently Negri of Pavia has described a micro-organism in the nervous system of animals suffering from rabies. It is of the nature of a protozoon, round, oval or angular, varying widely in size from 1 to 20 μ in diameter. These protozoa have been found within the nerve cells, in all parts of the nervous system, and Negri claims to have demonstrated them in fifty out of fifty-two cases examined. They were not present in conditions other than rabies. He also found the organism in one case in man. The smaller bodies are homogeneous; the larger ones granular in shape with one or more nuclei. The diagnostic value of Negri's bodies has been warmly supported by various observers, notably by Poor. He investigated sixteen cases of rabies occurring naturally (including one in man) and an equal number of cases where the disease was produced artificially by inoculation. A small piece of the cerebellar cortex, and another

portion from the cornu ammonis of the cerebral cortex, were systematically examined. In all Poor's cases the Negri bodies were found in one or other of these situations. Twenty-three control cases in animals suffering from diseases other than rabies, were similarly examined, and in none of them were there found Negri bodies or anything resembling them. The advantage of this method of diagnosis is its rapidity. By this means a diagnosis can be made within twenty-four hours instead of waiting days or weeks for the result of inoculation experiments, when, moreover, the inoculated animal may die prematurely from other causes. Poor states that the Negri bodies are remarkably resistant to post-mortem changes, so that even though the brain be not quite fresh, a diagnosis may still be possible.—*Medical Annual*, 1906.

Medical Books.

RECENT BOOKS PUBLISHED.

Kirke's Physiology	...	...	...	...	<i>Cousland.</i>
Luff's Chemistry	...	...	...	...	<i>Gillison.</i>
Manual of Nursing	...	...	...	...	<i>C. C. M. M. A.</i>

IN PRESS OR PREPARING.

Eye diseases	}	...	...	...	...	<i>Neal.</i>
Skin „						
Bacteriology	...	...	...	...	...	<i>Venable.</i>
Tropical Diseases	...	...	...	...	...	<i>Main.</i>
Obstetrics	...	...	...	...	...	<i>Niles.</i>
Osler's Medicine...	<i>Cousland.</i>

(Editor.)

The China Medical Missionary Journal.

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Editorial.

THE COMING MEETING OF THE CHINA MEDICAL MISSIONARY ASSOCIATION.

Inasmuch as the tentative program of the Centenary Conference, to be held in Shanghai next spring, has now been issued, would it not be well for the committee, which was appointed at the last meeting of the C. M. M. A. in 1905, to begin immediately to arrange the program for the meeting which was agreed upon to take place in connection with the Centenary Conference, either immediately before or immediately after?

As the date announced for the Centenary Conference is the busiest time of the year for many of those in the interior, so that some will not be able to leave their work at that time, and as correspondence takes so long, still, notwithstanding the great improvement in this respect since the introduction of the Chinese postal system, it would seem wise to formulate plans at as early a date as possible and announce the program very soon, so that all may make their plans accordingly. It is to be hoped that there will be a much larger attendance at the coming meeting next spring than was the case last year, when owing to the meeting being held in the winter, when travel is difficult from northern points, only about forty members of the Association were able to attend the meeting. Next year, with the Centenary Conference to act as an additional incentive, there should be no difficulty in securing an attendance of half as many again.

All who attended the last meeting felt that any inconvenience they had experienced in getting to the meeting was more than repaid by the interesting sessions, the *esprit de corps* and the general feeling of kindness which pervaded those days which we spent together. It was the universal feeling that we must have more

frequent meetings in the future and that we had lost much in not meeting during the past decade at least once in three or four years. There will doubtless be quite as many interesting subjects to discuss during the coming meeting as during the last, but in order to interest the greatest number the program for the meetings should be in the hands of members of the Association at as early a date as possible.

We should all remember, however, that though the arrangements for this Conference are in the hands of a special committee, it will be necessary for all of us to work together in furthering such plans as the committee may make, in order to insure the best results from our meeting together. Let us have an early report from our committee and then let us all put our shoulders to the wheel and do our best to make the Conference the best we have ever had.

THE WORK OF THE PUBLICATION COMMITTEE.

Doubtless many of those who have contributed to the funds of the above committee and others who are interested in the securing of a uniform series of text-books of medicine in Chinese have wondered what was being done by the committee to whom the task of arranging for such a series was committed by the Association at its last meeting.

While the committee is not ready to make a detailed report of its work, such as it will present to the coming meeting of the Association next spring, we are happy to learn, through the chairman of that committee, that they have not been idle, and that owing to the loyal support of the members of the Association and their friends in the matter of contributions, they have been able to arrange for the publication of the following books, all of which are either now in press or will soon be in the hands of the printers. Before going into this list in detail it is fitting that we should say that though Whitney's new translation of Gray's Anatomy is not under the control of the committee and the committee is not responsible for its preparation, yet it conforms to the new terms, and as being the foundation book in such a series as is being worked out, deserves to be mentioned first. It is now complete and can be had in Shanghai for \$3 Mexican per set of three volumes.

1st. Cousland's *Physiology*, being a translation of Haliburton's *Handbook*, was the first book adopted by the committee. The first edition of 500 copies was sold out within a year of publication and a new edition is now nearly ready for publication.

2nd. Ingram's *Therapeutics*, being a translation of Wood and Hare, has been passed upon by the committee and is now in press. It is hoped it may be ready for publication about the end of the present year.

3rd. Neal's *Diseases of the Eye* has been revised and accepted by the committee and will be issued as the fourth edition of the original book. It is now in press and will be on sale early in the autumn.

4th. Main's *Surgical Handbook*, being a translation of Caird and Catbcart, we hope to see in press soon; Dr. Main having been delayed in his work on the book by the press of other duties.

5th. Main's *Diseases of Warm Climates*, a translation of Davidson, it is hoped may soon be ready for the press.

6th. Venable's *Bacteriology*. Dr. Venable has finished the first half of his work, and is thinking seriously of issuing it separately, without waiting for time to complete the technical portion of the book.

7th. Niles' *Obstetrics*. Dr. Niles, of Canton, is preparing a new *Obstetrics*, which is mainly a translation of Evans' book, but which is designed also to take the place of Kerr's *Obstetrics* in the old series of the Canton Society.

8th. Fulton's *Diseases of Women*, being a translation of Penrose's book, has been examined by the committee and will soon be ready to place in the hands of the printers.

9th. Neal's *Diseases of the Skin* has been revised and accepted and is now in press for publication during the coming autumn.

10th. *Manual of Nursing*, issued by the Hankow branch of the C. M. M. A. This little book, while not passing under the supervision of the committee, nor being paid for out of its funds, contains most of the new terms, and is understood to belong to the Association.

In addition to the above Dr. Cousland has undertaken the translation of Osler's *Practice*, for which he has secured the promise of a thousand Mexicans from a Chinese friend in south China.

Owing to his absence from the country, work on this translation has necessarily been delayed, but will be pushed as soon as Dr. Cousland returns from his furlough. Dr. Mary Niles, too, has kindly consented to undertake the revision of Kerr's Practice, a book of very high merit belonging to the Canton series, which it is thought it will pay to reissue in revised form.

The Canton Society has agreed to allow the committee to revise and reissue any of its books it chooses to, with the understanding that they receive half the profits from sales of the same. So far only the Practice and the Obstetrics have been so chosen, but it may be that more will be undertaken later.

It is hoped that all the above books will be either wholly or in part (except Cousland's translation of Osler) ready for exhibition and be for sale by the time of the meeting of the Association next spring.

THE WHITE FEATHER.

TIENTSIN, 1st June, 1906.

DEAR MR. EDITOR: Your appeal anent the empty state of your barrel moves me to send a line, though it should only be to give my testimony to the good medical missionaries are doing. My vocation and pleasure brings me into contact with not a few, and many others send me their reports. The most cursory perusal of the same leaves me often in a difficulty as to one point—the varying proportion of cases requiring general anæsthesia. For instance, my friend Dr. A. shows 25,000 visits or thereabouts and only forty cases for ether, whereas Dr. B., with an out-patient run of only 8,000 ($\frac{1}{2}$), yet has 450 in-patients requiring a general anæsthetic. Nor is it a question of accommodation, nor yet that the one has never learned the use of cocaine and such drugs. Let us make every allowance for difference in training, outlook, locality and all else that may affect the question, and yet there remains a great gulf.

I am afraid, Mr. Editor, that I have come to a very uncharitable conclusion on this point, viz., that there are some medicals, either through timidity or other cause, refusing to tackle serious cases. It is not nice to think that among such a noble band of men there are some who make an easy billet for themselves by picking harelips, cataracts and easily removed tumors and avoiding troublesome cases involving trying operations and slow convalescence. You recognise spiritual responsibility, as soon as the out-patient hall is entered, by declaring the Gospel. Does medical responsibility not date from the consultation room, even though

it should only be to relieve one-hundredth part? How comes it, then, that so many operable cases are glibly put off? It is easy to find an excuse, poor plant, native suspicion, single-handed, etc., but surely not to conscientious men. For my part I don't think medical missions are here to attempt to meet the medical needs of the district in which they are situated and out-patients should only be seen as often as it is necessary to keep the wards full. It is after all an expensive bribe to get a crowd of say one hundred to listen for half an hour to the Gospel. That may be better and cheaper done by the parson. The medical benefit accruing from such work is admittedly small and will soon be met in other ways, and it is a question if much of a tie is thus established. Let big statistics go, spend more energy on in-patient work, concentrate to get thoroughness and surely it should stand to reason that the longest resident are the likeliest, humanly speaking, to be spiritually influenced. Is it not a universal experience that the most hopeless medically are often the most hopeful spiritually? Do your harelips and cysts with cocaine, by all means, but not to the turning away of more needy though less showy cases. To be bright and cheery always in a ward of "chronics" is the work of a medical missionary; much of the rest at least could be done by a "mere medical."

But Mr. Editor, I hope I have said enough to show you that I really want a kindlier explanation of the big statistics man.

Yours, etc.,

A MERE MEDICAL.

Criticism, when made in the spirit of this letter, must ever be given the warmest kind of a welcome. Its value is incalculable. It is as different from the carping criticism of prejudice as a summer's shower from a desert sandstorm. Moreover, criticism thus made is more than apt to be true, whereas the other is more than apt to be untrue.

It is an important question that this letter raises and one that, if true, should be seriously considered by every one of us. Are some of us using our isolation and freedom from the possibility of serious professional criticism as a cloak for laziness or cowardice? There is no use mincing matters. That is the question raised and that is the question we are asked to answer.

We find it very hard to get a grip on the matter. Those of us who see the reports of practically every centre of medical work in China, can easily verify the facts that the writer of the letter states, namely, that some of our reports are so at variance with others as to

show some strong influence other than "the run of cases" in their formation. One hospital will treat ten thousand patients a year, and do twenty operations, all told, under general anæsthesia. Another will treat the same number, approximately, and do fifty or more abdominal sections. In one, the amputation of fingers seems to be the limit, in another we hear of cæsarian section and gastrectomy. What is the explanation? Is it the painful one more than hinted at in the letter?

The question is sufficiently complicated to render it difficult to get a grip on. So many considerations enter into it that one is almost afraid to attempt to judge any particular case. But on the whole we believe that before the bar of superhuman wisdom we should stand acquitted of the charge of cowardice. By this we do not mean that there are no faint-hearted surgeons in our midst, for there probably are such, but even if there are, not all of these are thereby guilty of cowardice. One of the most distinguished consultant physicians in Philadelphia, a man well known to each of us by excellent reputation, a professor in one of our leading medical schools, positively turns sick at the necessity of administering a hypodermic injection. Yet he is as fearless a bacteriologist as any living. There are probably many physicians so constituted in lesser degree.

Then it is almost a truism that a man can make his run of cases whatever he pleases, within limits, by surpassing in one line of work and showing his particular ability and readiness to undertake that line in preference to others. The Chinese are more than capable of recognizing this fact and seeking a man who has shown his skill in a certain line for the cure of that line of complaint. We know one of our number who is so situated that he can only at present admit and attend to properly (God bless him for not admitting what he cannot attend to properly) three or four patients at a time. He happens to be particularly interested in, and to have been especially successful in the removal of, stone from the bladder. He has the only work in his station, and there are so many applications for the removal of stone that he always has a waiting list and practically takes in no other cases for operation. He usually does the suprapubic operation and has had magnificent success, never yet getting an infected wound. Is that man a coward because he

does not take in gall-stone cases? Not by any means. He is one of our pluckiest of many plucky surgeons. We happen to know it. He is merely working under peculiar circumstances. It is merely a case of specializing and a very sensible instance.

One man is equipped for intern surgery, another is not. One man fancies general surgery, another does not. One man is presented with abdominal work, another is not. One man is a born surgeon, another is not.

We so far differ from the suggestion that many of us show the white feather, that we believe it is already a proven fact that, as a group, the medical missionary physicians and surgeons of the world are, man for man, as plucky as any other set of men in the world of effort. We even go one further. We believe that, man for man, the medical missionaries are, for their time of service, the most experienced and generally competent physicians in the world.

Having said this much we will admit that we believe also that there are some very few missionary physicians who do show, whether from insufficient preliminary training, or from natural timidity, the white feather, and we sincerely deprecate the fact. The other day we were shown in consultation a magnificent case of multilocular ovarian cysts. It had been tapped three times by a missionary physician. Now the tapping of ovarian cysts is an antiquated, very back-numberish, and extremely dangerous and practically unwarranted procedure. In this particular case, if the diagnosis was mistaken, it was an expression of gross ignorance or worse carelessness. If the diagnosis was not mistaken then the tapping was absolutely unwarranted and open to the suspicion of trifling with human life. The woman physician who showed us the case then proceeded to open the abdomen and very prettily removed the large cyst and the patient made a rapid and perfect recovery without even a stitch going wrong. We have since then seen the patient well and hearty. The only complication in the operative procedure was the difficulty of breaking the adhesions caused by the punctures and the slight old peritonitis probably of like origin.

While in the mission field let us do as little or as much as we please and think right. It is not necessary to operate if we do not

feel competent. It is not necessary to come out to do mission work unless we feel competent. But what we do let us do well. Let us not confuse ovarian cysts with hydroceles, or even with ascites. Let us do our tapping with our fingers and externally and not with a trochar which may hit a bloodvessel and cause death from hæmorrhage within five minutes or let loose a malignant growth on the peritoneum.

SIGNED EDITORIAL.

MALARIAL PROPHYLAXIS.

Perhaps one may say that there has been no advance in medicine in the last five years which in any way compares with what has been accomplished in the direction of malarial prophylaxis.

Certainly there has been no advance which can in any way compare with it in the relief of suffering to thousands in tropical countries.

When one considers for a moment the story of the Japanese troops in Formosa, this is abundantly proved. Whereas in former years malarial fever was a serious foe, and one which caused many deaths and a large amount of illness; it is now, thanks to the precautions adopted, a foe which, though perhaps not killed, has been effectually crushed.

But although this is sufficiently recognized as a fact, its bearing on the individual and the care of his health is sometimes not only lost sight of, but deliberately avoided.

One may say, speaking generally, that there are three broad lines on which prophylaxis may run :—

- (1.) One may destroy the breeding grounds of the mosquito.
- (2.) One may guard against their bites by proper mosquito net protection.
- (3.) One may regularly consume a drug which will prevent the growth of the malarial plasmodium if introduced by the mosquito bite.

As to 1, it is a counsel of perfection as far as most places in China are concerned. Still a good deal may be done, even if one cannot drain the rice fields. One may at least destroy the breeding grounds in one's own garden. Ornamental lakes and water

lilies are not necessities of life, neither are stagnant pools and uncovered water tanks. All ground should be properly filled up and properly drained, so that the heavy rainfall may rapidly run off. Tubs and reservoirs can be covered with netting or other cover impervious to the mosquito.

But it is to 2 that one wishes to draw special attention. It appals one sometimes to see the utter carelessness of those who ought to know better, medical missionaries not excluded.

Perhaps they have a mosquito net, but it has holes in it and might almost as well be non-existent. Or it is cool weather and "there are only a few mosquitoes about," and it is "not worth the worry."

And the worst of it is, that these offenders, by reason of their standing, lead their ministerial colleagues and others to think that the whole matter is somewhat of a fad.

It ought to be the case that the getting of malarial fever should be looked upon as a disgrace. Whatever was the case in the old days, it is now neither a necessity nor is it a mark of missionary devotion.

So much for the matter of the personal mosquito net which, it is unnecessary to say, should not be after Chinese style, opening down the side. It should be complete all round, be amply long enough, hung inside the poles and tucked under the mat or sheet or quilt on which one is lying, as the case may be.

But one may go a step further and urge the protection of the family. It is not a costly business to protect a house with wire netting, and as to the result, well, the writer of this article is in peace as regards these small pests, while outside the house they are simply swarming.

It is said that this method raises the temperature of the house and obstructs the wind. As far as one can judge from a good personal experience, neither of these objections is worth consideration. To fight with mosquitoes makes one much hotter, both physically and as regards the temper, than any amount of wire netting. And moreover the facts as stated are not borne out by the writer's thermometer.

And even barring the question of malarial fever it is, not by any means certain that a good deal of the chronic ill-health of the

tropics is not due to the constant inoculation of poison by these mosquitoes. And what about the children? Surely it is hardly fair to leave them out of account, and certainly the difference to them between a mosquito protected house, and one after the old style is very great.

Another great boon is the absence of flies. From the health point of view the gain is marked, and there is no danger of one's food being infected by some fly which has just left, let us say, the street of a native city in China. But this is by the way.

Surely one may plead that greater attention may be given to this matter by the members of our Association, knowing as they do that their example is better than precept.

As to this wire netting, it is easily bought from America and set up without difficulty. The entrances to the house should be on the plan of a small passage with a door at each end, both opening outwards and closed by strong springs; these doors should be sufficiently far apart to prevent their being opened together by the same person.

Swing doors have, in my experience, not proved an unmixed success. They easily get out of order with changes in the weather, and are not as effectual in excluding the mosquitoes.

To turn in closing to method No. (3).

It is fairly certain that this method is satisfactory, and it does not seem to matter whether the dose be taken daily, or a proportionately larger dose once or twice a week. But it is clear that this method is not as good as the one which has just been discussed. For one thing, some people cannot tolerate *quinine*, as it upsets their stomach, or gives them urticaria, or tinnitus aurium. Whether persons of this temperament should be allowed to come to malarial countries at all is a different question. In others, as in the writer's own case, two to four grains of *quinine* can be taken daily without any trouble, and in these cases, when away from home itinerating and living in Chinese homes, it is certainly better to adopt this precaution.

In any case it is abundantly clear that for the sake of God's work we, as those to whom He has entrusted the care of the health of our fellows, cannot afford to be careless in this matter.

J. P. M.

Hospital Reports.

The Union Medical College was opened on the 14th of February, 1906. The *Prospectus of the Union Medical College, Peking, 1906-07.*

The hospital attached to the College is amply equipped for the clinical training of the students. The professors and lecturers are drawn principally from the missions in the North China Educational Union and from co-operating missions. Chinese tutors are also included in the teaching staff.

The College has been established to provide well-educated Chinese with as thorough a knowledge as possible of the various branches of medicine and surgery. The degree of Doctor of Medicine will be conferred upon those students who succeed in passing the final examination.

The preliminary examinations are held in February each year in the College. Candidates desiring to enter for the next college year should be in Peking before February 22nd, 1907, and should communicate with the Dean on their arrival.

The following are the members of the Faculty:—Thomas Cochrane, M.B., C.M., Dean; Nehemiah S. Hopkins, M.D., O. et A. Chir.; James H. Ingram, M.D.; George D. Lowry, M.A., M.D.; Charles Lewis, M.A., M.D.; Joseph F. Griggs, M.A., M.D.; Ernest J. Peill, M.B., Ch.B., F.R.C.S. (Edin.); Charles W. Young, B.S., M.D.; W. H. Graham Aspland, M.D., C.M., F.R.C.S. (Edin.), M.R.C.S., L.R.C.P. (Lond.), and thirteen other gentlemen as lecturers.

The medical course covers five years of nine months each. The year begins on or about the 20th of the Chinese first month and continues until the 20th of June; the

autumn term begins on or about the 20th of September and continues until the Chinese New Year.

The course of study is arranged so as to teach the fundamental branches in the first two years by lectures and laboratory work, and to give training in medicine, surgery and the specialties during the last three years. It is expected that in the last three years the students will assist in the wards, clinics and operating rooms, thus obtaining practical experience in the diagnosis and treatment of disease under the guidance of the heads of departments. In addition to the hospital attached to the College, the other hospitals and dispensaries in the city are open for the clinical training of the students.

Both Hospitals are now open to patients. During the year 1905 we registered 711 in-patients, 19,232 visits at the Poly-clinic and 1,643 operations were performed.

Report of the Tungkun Medical Missionary Hospitals, 1905.

REPORT OF DR. KUHNE.

Clinical Remarks.

The *soda sublimate* treatment of burns gave us, as in former years, good results. The thorough cleansing at the first visit takes much time, it is true, but it spares much annoyance in the after-treatment. A girl of 15, whose face was scalded with boiling water, was treated in that way, and the wounds healed in less than a week.

Cancers and epitheliomata are not so frequent as in Europe; on the other hand, fibromata have a tendency to become malignant and lymphadenomata are often a cause of death. A boy who for three

years had suffered from a large swelling on both sides of the jaw was operated on through the mouth for a double ranula, and cured.

In the Hospital we had two cases of death. One was a slave girl suffering from stone in the bladder, who, having been ill for ten years, wanted to die and refused all kinds of nourishment. Her master, a rich graduate of San-tong, asked me to try to do something for her. I removed the stone in fragments through a large vesico-vaginal fistula, but could not save the life of the girl, who died five days after the operation. A boy was brought to us suffering from chronic malaria. His blood was so deteriorated that drugs were of no avail.

A young woman, 26 years of age, Sau Lin, had for two years suffered from a large hard tumour in the abdomen which nearly reached to the sternum, and was diagnosed as an extra-peritoneal fibroma of the uterus. At the operation, at which Dr. Olpp assisted me, was found a hard multilocular cyst of the ovary. It was slowly taken out through the incision, and after ligaturing the pedicle, was cut off as a whole. It weighed about eight pounds. The patient made uninterrupted recovery.

REPORT OF DR. G. OLPP.

The boarding of the inmates is no longer in the hands of the cook, but in those of Mr. Baumann, who every day gives out the requisite quantity of rice. An agreement has been made with certain shops about other food stuffs, and these have their accounts settled at the end of each month.

The rebuilding of the out-patient department was commenced in 1903,

B. M. S. Medical Mission Hospital Report, 1905. but owing to the dilatoriness of the workmen was not ready for use till the end of 1904.

During the year 2,353 new out-patients (1,848 men and 505 women) attended on regular out-patient days, but no accurate record has been kept of visits on non-patient days or subsequent visits of new patients.

The present premises are quite inadequate for the increasing work, and if funds permit we hope to erect other rooms in 1906.

Hospital work is the work *par excellence* which yields the best results.

C. M. S. Hangchow Medical Mission Report, 1905. We treated the largest number of 1,474 in-patients,

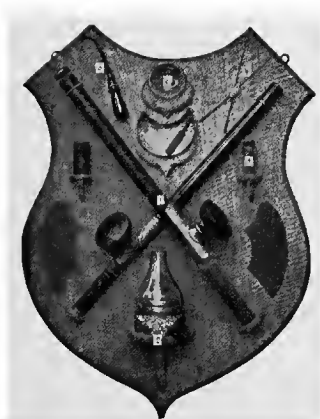
the largest on record. No medical missionary can do himself, his patients, or his supporters justice unless he has a hospital, and that well equipped and up to date, fitted with all the necessities of modern surgery; he also needs a good colleague, a practical chemist, and a qualified nurse and a number of well-trained native assistants; given these with an eagle's eye, a lady's hand (which our native assistants have) and a lion's heart, there is no limit to the possibilities of efficient work. In the wards almost every disease that flesh is heir to, is treated with more or less success.

Beri-Beri is considered by some to be endemic in China, but it is seldom ever met with here. During a quarter of a century we have only seen a very few acute cases. Occasionally we meet with the chronic and benign type.

Plague.—We have never yet met with the disease.

Malarial Fever.—Of all the diseases which afflict the Chinese none perhaps is of more importance than malaria; thousands of deaths are due to it and its sequelæ every year.

Cholera is greatly feared, and causes most anxiety among the people; fortunately it was only sporadic.



OPIUM INSTRUMENTS, PRESENTED BY
CURED OPIUM-SMOKERS (UNCLE AND
NEPHEW) TO THE TUNGKUN HOSPITAL.

Calculi.—Several are cut out every year.

Hernia is very common, and heredity seems to play a part in this disease. The climate also has considerable influence, as it produces a certain weakness of the abdominal tissues: the other causes are much the same as at home, viz., strain and unusual exertion. Many prefer to wear a truss rather than submit to an operation; still a few do submit every year to the radical cure.

Dysentery is also common, but prevails mostly in the chronic form, but does not figure largely as a direct cause of death.

Pneumonia is very dangerous, and we feel sure that many deaths, where the cause is given as fever, are in many cases due to pneumonia.

Typhoid is very common, but of a milder nature than at home; in many cases the bowel symptoms are not present and the *typhoid state* seldom manifests itself.

OPIMUM REFUGE.

118 opium smokers were admitted with their minds more or less, chiefly less, made up to break with the vice. More people are killed in China by opium smoking than by war. War may kill its thousands, but this its tens of thousands.

LEPER HOSPITAL.

At the beginning of the year there were twenty-three in the Refuge, and in the course of the year thirty-one were admitted; the total for the year was fifty-six, an increase on last year.

The re-opening of the Methodist and the Baptist Mission hospitals during the past year accounts for the considerable reduction in the number of our patients.

Statistics for the year are as follows:—

Dispensary attendances...	city	6,236
	country	586
		6,822
In-patients	men's hospital	314
	women's hospital	225
		539
Operations	major	101
	minor	392
		493

Fifty-seven per cent. of the in-patients were cured, forty-three cases (mostly incurables) received no physical benefit, and five patients died in hospital.

The work of the hospital has been carried on without interruption during the past year. There have been 1,221 in-patients and 80,573 out-patients treated. These totals are somewhat below last year's, owing to changes which have been made in the management.

Since last June all out-patients able to do so have paid ten cash for each visit.

As expected, this has reduced the numbers somewhat, probably keeping away many with little the matter with them. At the same time, a good sum towards the cost of the dispensary work has come into the coffers of the Hospital from the out-patients, viz., \$493.

Further, over eighteen hundred patients have had their cases gone into more thoroughly and been given four days' supply of medicine. This would account for five or six thousand daily visits, so that the decrease is not so real as it appears and does not mean decrease in the usefulness of the institution. Again, with regard to the in-patients, we have as far as possible limited ad-

mission to those only really needing Hospital treatment. For instance, 454 of the native police force were warded during 1904. During the year only 172 were warded, the rest being treated as out-patients, getting well just as soon, and probably getting back on duty the sooner.

The total number of in-patients requiring *chloroform* or surgical operation has been 214, as against 79 last year.

Developments:—In-patients, as before, pay at the rate of 100 cash a day for their rice. All patients are now, however, provided for by the hospital and none are allowed to go out for their meals.

The following outstanding features of the work it may be of interest to mention.

(1). The enormous numbers of attempted opium suicides, 318 cases during this past year (196 males, 122 females) were brought to the hospital. Of these 25 died and 293 recovered. The ages of the unfortunate patients ranged from 12 to 65. At times there have been three or four undergoing treatment simultaneously in the waiting room. As each requires constant and vigorous treatment (and they mostly come at night) the strain on the assistants

at such a time is no small one. But for the care and treatment bestowed, what tragedies would have been consummated! What a number of homes would have been robbed of a member and been thrown into sorrow and mourning.

(2). The large number of accidents. This class comprised over 30 per cent. of the in-patients.

In this class we may mention the case of the coolie who so heroically saved a child in the Kiukiang Road fire. He went home after six months' treatment in the Hospital, but with both hands practically useless. Through the generosity of foreign and Chinese friends he and his family were supported, and with the sum raised by members of the Stock Exchange we were able to redeem his family estate from pawn, give him a good sum to start anew at farming, and now at the Chinese New Year hand him over the balance, when he came up looking strong and well.

Scale of charges:—

Ordinary out-patients	...	10 cash a visit,
Out of time	„	... \$1 „
Opium suicides,	pay as they are able.	
Visits paid to patient's home	\$5—Tls. 10.	
Patients in the general wards,	100 cash a day,	
„	„ private	„ \$1 „



TRANSPLANTATION OF CUTICLE ON THE BACK OF A
MAN SUFFERING FROM AN EXTENSIVE CARBUNCLE

Correspondence.

DEAR SIR: May I venture to call the attention of our members to a preparation which was described some time ago in the *British Medical Journal*. Its simplicity and effectiveness in many of the cases so common in medical missionary practice must be my excuse for writing about what may be well known to others. The preparation consists of equal parts of *camphor* and pure *carbolic acid*, and on mixing they form an oily fluid, with a pleasant smell, which, while powerfully antiseptic, has very little caustic effect, certainly none at all comparable to pure *carbolic acid* alone. Its effect on the fingers of the surgeon is scarcely more than that of a one in ten aqueous solution. Since reading about it I have given it an extensive trial and find it wonderfully useful in cleaning septic wounds, abscess cavities, etc. It can be applied by slightly moistening gauze with it when laying this on an ulcer or packing an abscess. The next day the wound is found almost if not quite clean and well granulating.

It is also very effective when used for boils and carbuncles, but perhaps its greatest value is in cases of whitlows and septic hands, usually requiring an anæsthetic and very extensive incisions. In these cases I constantly find that as large an incision as can easily be made without an anæsthetic, followed by fairly deep plugging with gauze moistened with this preparation, is as effective as large operations and perhaps more so.

It does not appear to be painful, but care should be taken not to use it too long, especially if it is in contact with skin, as it sometimes causes eczema. Some cases seem

less irritated by it than others, and in them it can be used for long periods, as is useful in tuberculous cases, though so far I have not had such good results with it in them as I had hoped.

Believe me,

Yours truly,

HUGH H. WEIR.

ST. LUKE'S HOSPITAL, English Church Mission, Chemulpo, Korea.

DEAR SIR: I am trying to take to heart your Editors' appeal in the May number of the *MEDICAL MISSIONARY JOURNAL* for literary support on the part of the members; and hope before long to do something that way.

I have not hitherto found myself able to send in a "statistics" report, as the way our statistics have been kept by my assistant, Dr. R. Yü, was so diverse to your form. That is being altered.

We shortly hope to open our recently built hospital; the (former) Douthwaite Memorial Hospital having been rebuilt on a new site. Dr. Yü has now left, and I am taking full charge personally, though my principal work, to a large extent, is the medical attendance on the Chefoo schools and missionary community.

Can you inform me if there is likely to be an issue at an early date of the following?

A revised translation or edition of Hunter's therapeutics, to correspond to the 1898 P. B. and new nomenclature?

A new Osgood's Anatomy in the new nomenclature?

Any other medical text books likely to appear soon, i.e., in a year or two?

If the publication committee are inclined (per the Mission Press) to keep in stock some copies of the English editions of medical books translated besides Halliburton: For example, Steele's Physics, or Parker's, Luff's Chemistry, etc.?

You need not reply to me personally if a note in the JOURNAL for your readers would serve the purpose better.

With kind regards,

Yours sincerely,

ALFRED HOGG.

C. I. M., CHEFOO, July 5, 1906.



MARY H. PERKINS MEMORIAL HOSPITAL.

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HYGIENE IN CHINA.

By ARTHUR STANLEY, M.D., B.S., Lond., D.P.H.

Health Officer of Shanghai.

As a sequel to a previous paper on 'Chinese Hygiene,' which attempted to demonstrate the evolution of the principles of hygiene as a part of general Chinese civilisation, it is proposed to indicate where it may be possible to improve Chinese hygiene by grafting modern methods of sanitation.

It may, however, be asked with what object? The population of China is already so immense, and apparently sufficient for the agricultural yield of the country, that any suggestion for the prolongation of life of its inhabitants might appear unnecessary. The application of steam, mining and other modern commercial methods in China will, however, increase wealth and enable a still larger population to be supported. Modern sanitation will follow modern commercial methods. The sequence will be increased wealth, improved sanitation, greater population, until other evolutionary processes will come into play, which will limit population.

Modern civilisation, however, brings both benefits and dangers. Here is a trivial example. As long as the Chinaman drinks nothing but weak tea he is pretty safe from waterborne disease, but when he consumes aerated waters and iced drinks he soon falls a victim.

The hygienic regeneration of China will probably come from within as a result of education and a knowledge of the benefits resulting from sanitation. It is likely that military hygiene will receive attention first.

Where educated foreigners come in contact with Chinese it is possible to impart a little knowledge of modern hygiene, and it may be remembered, in an altruistic spirit, that hygienic measures benefiting the native benefit the foreigner also who lives amongst them.

The very first principle of sanitation is prevention of infection. The average man has drains on the brain and neglects the most obvious precautions in his anxiety about them. Typhoid fever, diphtheria and many other diseases are still attributed to drain effluvium. It was not until the parasitic origin of disease was established that the real cause of infective disease began to be understood and vague and general were replaced by precise and definite measures of sanitation. The main object of sanitation, therefore, being the suppression of infective disease—disease produced by parasites—it is now possible to formulate sanitary measures with a greater degree of precision. Here follows an outline of the more obvious measures of sanitation possible of application among missionaries and others brought in contact with the Chinese by means of hospitals and dispensaries.

FIRST MEASURE: VACCINATION AGAINST SMALL-POX.

In China vaccination against small-pox should be first and foremost among sanitary measures. The Chinese understand vaccination and, indeed, practised inoculation of mild small-pox as a protective against severe small-pox long before the days of Jenner. Vaccination can be offered at every hospital throughout China and country stations established so as to take it to the homes of the people. Vaccination lends itself also to itinerant work.

The following handbill, offering free vaccination, is in use by the Municipal Health Department in Shanghai:—

工部局衛生部
現種牛痘
如欲種痘
者到四馬路
捕房後救
火會第一
號洋房醫
官本局請
種可處也
特諭

SECOND MEASURE: PREVENTION OF TUBERCULOSIS.

Tuberculosis of the lungs is recognised as a serious scourge by the natives of the great cities. At every hospital instruction can be given in the mode of infection and to spit nowhere except into a spittoon containing water (or disinfectant) into the fire or down a drain, and not to cough into the face of another person. Every hospital should, if possible, have a ward for tuberculosis and the treatment of tubercular cases as in-patients be encouraged at least until the patient

has learnt the way of preventing the communication of his disease to others. Consumptive patients can be furnished with a leaflet, which should be explained by word of mouth, giving these particulars. The following is in use by the Shanghai Health Office:—

上海工部衛生局預防癆症傳染之法

- 一 住居上海之華人、有四分之一、患癆症身故、
- 一 癆症最易傳染、然除滅淨盡、亦自有法、
- 一 癆症初起、係人感受病者毒苗、吸入腹內、以致染成是病、然實驗其
- 害之由來、緣微生物根於病人痰內、且及於病者與人言笑噴嚏咳嗽之時、隨口四射之涎末、
- 一 微生物由何而起、係從癆症人發生、其蕃衍不可計數者、尤在痰爲叢聚之處、
- 一 癆症之人、吐出濕痰、其毒尙難播散、迨日久曝乾、氣挾塵埃、隨風颺散、其害遂不可思議、能使傳染無盡、由此人而禍及他人、
- 一 沿路吐痰、大爲穢德、况吐出之痰、爲患癆之人、則遺害更覺無限、故吐痰必盛以磁盂、且盂內須貯除穢藥水、或置清水、更或向陰溝火爐之內吐痰、如此、方可無患、
- 一 既患癆症、應隨時防閑、勿對人咳嗽、

PREVENTION OF TUBERCULOSIS.

[*Translation.*]

1. Consumption causes one death in every four among the Chinese living in Shanghai.
2. Consumption is an infectious disease and is preventable.
3. Consumption is contracted by taking into the body, chiefly by the breath, the germ of the disease. The germ is contained in the spit of consumptives and in the minute droplets sprayed into the air by consumptives in coughing, speaking, or sneezing.
4. These germs are only derived from persons suffering from consumption and are found in great numbers in the spit.
5. In a moist state this spit does not infect the air, but if allowed to dry and become dust, it is very dangerous and is then a means by which the disease is spread from person to person.
6. Promiscuous spitting is a dirty habit, and a consumptive should not spit anywhere except into a spittoon containing water or disinfectant, into the fire, or down a drain.
7. A consumptive should not cough into the face of another person.

THIRD MEASURE: PRECAUTIONS AGAINST MALARIA.

Malaria appears to be recognised as a disease by the Chinese, but they require to be taught how it is caught. A fear of the mosquito should be instilled and attempts made to eliminate stagnant water. The use of the mosquito net can be recommended, especially over malarial patients.

Mosquitoes may be collected, and districts harbouring the *Anopheles* genus condemned as malarial. If in doubt, the genera and species will be identified at the Shanghai Municipal Laboratory. Specimens of other blood-sucking flies, ticks, etc., will also be thankfully received for identification in view of their probable importance as disease carriers.

FOURTH MEASURE: PRECAUTIONS AS REGARDS FOOD.

These entail the prevention of cholera, typhoid fever, dysentery and most bowel diseases. The shortest summary of the precautions is—eat and drink nothing that has not been recently cooked or otherwise sterilised. If the meaning of the word sterilise could be conveyed it would be found most useful. As a rule the Chinese are very careful to cook everything that they swallow, and hence have a greater immunity from bowel complaints than the foreign resident.

FIFTH MEASURE: ENDEAVOUR TO ISOLATE AND DISINFECT CASES OF INFECTIVE DISEASE.

SIXTH MEASURE: GENERAL MEASURES OF CLEANLINESS OF THE PERSON, OF THE HOUSE AND THE STREET.

The following general public health notice is used by the Shanghai Health Office:—

工部局衛生示諭

爲出示曉諭事，照得衛生之法，全賴飲食起居，講求潔淨，所有各樣物宜掃除淨盡，本局史醫官，臚列以下各條，望人一體遵照，可免天花、霍亂、痢疾、喉痧、紅疹、癩症、瘧疾、諸項病目。

公用各法

一 凡查驗房屋潔淨之處，可稟報河南路一號本局醫官，以便派人料理，並不取費。

一 各項穢物，有礙衛生事宜者，務隨時報知本局醫官。

一 本局於靶子路建造醫院一所，專備居民感染疾疫危險病症，俱可送入院內醫治，不費民間分文，如欲獨

居一室，醫愈疾病，醫院中亦備有此等房屋，不過病者略行貼費。

一 民間房屋，前曾寓有患疫之人，可逕稟本局醫官，當派人至其室內，代爲收拾潔淨，毫不取費於民。

居家各法

一 食物宜下鍋煮透，方可入口，由西歷六月起至十月止，煮熟各物，不准越宿再食，菜葉貼近地面，易染傷寒

霍亂及腸內諸般病症，故未煮之前，勿與他種食物移近，必待烹飪已熟，方可無患。

一 水未煮過，慎勿入口，嘴嚙水、冰凍水，皆與人有害，惟茶最爲平穩，無論寒暑，俱極相宜。

一 蚊繩最能傳病，故食物必須遮蓋，以免散毒於內，致人誤食生病，蚊蟲吮人，卽能變成瘧疾，故寢時務將帳

子垂下，有人內地遊歷者，帳子益不可不用，淺沼之內，蚊易散子，若用火油少許沖下，則可斷其生機，家有

積水，立卽除去，則蚊亦不生。

一 垃圾不宜存積，宜備一輕便之白鉛桶，將垃圾倒入於內，居戶便桶，其蓋應閉置完密，如因垃圾桶及糞桶

無從購辦，可向河南路一號，本工部局售取。

一 天井暨陰溝，宜每日用多水沖洗，勿任坍陷。

一 吐痰於沿路，最爲穢德，苟吐出之痰，爲癆症之人，則遺害更不堪設想，故吐痰於陰溝火爐之內，方可無患。

一 居民當種牛痘，若依舊法用痘痂塞入鼻孔，雖一人不染天花之毒，而其餘則被彼傳染，皆須殃及。

一 如欲種牛痘者，可於每日至河南路一號工部衛生局內，不取分文。

PUBLIC HEALTH NOTICE FOR CHINESE.

[Translation.]

The following measures are recommended for the purpose of preventing those diseases which, by means of individual careful living and by public sanitation, are preventable, such as small-pox, cholera, diarrhoea diphtheria, scarlet-fever, measles, consumption, plague and malaria.

Public Measures.

Sanitary Inspection of houses will be carried out free of charge by the Health Department on application to the Health Office, 1 Honan Road.

Nuisances dangerous to health should be reported to the Health Officer.

Isolation of cases of dangerous infectious disease is provided for at the Municipal Hospital, Range Road. The wards are free, but for private rooms a small charge is made.

Disinfection of premises, after infectious disease, will be carried out free of charge on application to the Health Officer.

Individual Measures.

Food should be thoroughly cooked. No cooked food should be kept overnight from June 1st to October 31st.

Vegetables and Fruit grown near the ground, being liable to infection with cholera and other diseases of the guts, should be separated from the rest of the food before cooking. Cooking destroys the infective material.

Water should not be drunk unless it has been boiled. Aerated waters and such cold drinks are often dangerous to health. Tea is the best drink for both hot and cold weather.

Mosquitoes and Flies carry disease; hence fly-covers should be used over cooked food. As mosquito bites carry malaria the mosquito net should be used, especially up country. Paraffin oil will prevent the development of mosquitoes in stagnant water, but no stagnant water should be allowed if possible.

Refuse should not be allowed to accumulate, and proper, easily lifted, galvaused iron receptacles should be used. Nightsoil buckets should be kept securely closed. Proper receptacles for these purposes can be obtained at the Health Office, 1 Houan Road.

Yards and Drains should be kept in a good state of repair and freely flushed with water.

Spitting, except into a spittoon, down a drain or into a fire, is a very dirty habit, and when the person who spits has consumption it is very dangerous to other persons by spreading the diseases.

Vaccination should be applied to everyone. The Chinese way of vaccinating with a scab of small-pox protects the individual but causes the disease to spread among those not vaccinated. Those wishing to be vaccinated, can be vaccinated at the Municipal Health Office, 1 Honan Road, free of charge.

SOME EMERGENCIES OF SURGERY.*

By CECIL J. DAVENPORT, F. R. C. S.

My object in choosing this subject for a paper was not so much to recall what shifts may be made when a case of emergency arises; as it was, and is, rather to freshen one's memory as to definite lines of treatment, which are called for by emergency cases, and upon which so much depends, but which alas! so easily slip from one's memory.

We are not general practitioners who may be landed at an isolated cottage after several miles' drive in the country. Under those conditions a fork may be bent so as to make a very useful sharp-pointed retractor, a spoon handle may be treated in the same way to make a blunt one, soup plates may be used for carbolizing trays and the slant of the back of a chair turned upside down may serve to keep a patient in the Trendelenburg position.

We are each one attached to a more or less well equipped hospital and have most necessities at hand. The emergency does not arise in the matter of instruments. It arises in the matter of memory, or method of procedure.

I have therefore selected a few cases, with which we may be suddenly confronted, and with the aid of hooks and a little personal experience, picked out important points, difficult questions and some methods of treatment, hoping it may be for our mutual benefit.

I. HEAD INJURIES.

Supposing we have the history of a blow, and on examination the scalp is found unbroken, but the deeper structures feel pulpy and the bone in the area seems depressed. Or it may be the bone is felt to be fractured for certain. What should be done?

* Written for the Hankow branch of the C. M. M. A.

If no bad signs are present, such as cerebral irritation, compression, etc., the patient should be kept quiet and put on the expectant treatment. If on the other hand, although no fracture is made out for certain, but there are signs of compression, it is best to be on the safe side and make an exploratory incision.

Compound Fractures of the Skull.

When a scalp wound is over a fracture of the skull, operation is the proper treatment, whether there are symptoms of intracranial injury or not.

Frequently ominous symptoms do not arise for a number of hours after the injury, and operative exploration then shows internal hæmorrhage, the disastrous effects of which might have been avoided by a safe and easy operation. The removal of loose pieces of bone, together with proper drainage, will be strong factors in preventing suppuration. Unless the patient is deeply unconscious *chloroform* will be necessary. It is best only to use saline solution for instruments and all intracranial work. It is unnecessary to say that the scalp should be shaved over a wide area and the wound and surrounding skin thoroughly cleaned.

The skin incision should follow the line of fracture and allow exploration from end to end. All loose pieces of bone should be removed, but in doing so, or in prising up the depressed portion, the rigid edge should be worked on as a fulcrum, and if necessary chiselled away, to allow of the removal or elevation. This is an important point.

Careful search is to be made for fragments between the bone and dura. To stop hæmorrhage it may be necessary to cut away more bone. A large clot in the extra-dural space may have caused all the pressure symptoms and the extra-dural injury may be the only one.

A case still in our wards illustrates some of these points. A man, aged thirty-eight, was sent on 1st April from the Gas. Co. Works, having had a weight fall on his head. He was conscious, and showed no signs of intracranial injury. Situated some two inches above his right eye was a lacerated scalp wound, down to the bone, which was felt to be depressed. *Chloroform* was given at once and the wound enlarged. The depressed bone being jammed in firmly, we cut the firm edges away till by them as fulcrum we could lever up the depressed bone. Some eight-ten pieces were removed in all; the inner layer being much comminuted and depressed. The dura was uninjured, and there was no serious hæmorrhage. The cavity left in the skull

was about $1 \times \frac{1}{2}$ iucb. A strip of gauze was left in to drain the cavity. The patient's temperature on the night of operation was 99.8 and pulse 100. Subsequently the course was normal, the wound cicatrized firmly up and the patient went out May 8th, well.

If there is no pulsation and the dura looks dark, as if clot were beneath, it should be incised; the incision being closed with catgut later.

Should the brain be lacerated only the loose shreds are to be removed. General oozing may be controlled by gentle irrigation of very hot saline solution. The brain bears high degrees of heat very well.

A spouting encephalic vessel may be tied by catgut.

Some drainage is to be maintained by strips, or wicks of gauze, the scalp being brought together in the greater part of the wound.

No antiseptic chemical should be used when working upon the brain.

Related to this subject is that of bullet injury with no wound of exit. The foreign body is lodged in the cranial cavity, and must cause trouble sooner or later. What is to be done?

As far as I can gather the method of procedure is as follows:—Enlarge the wound of entrance, and if hæmorrhage exist first pay attention to that.

A missile which has had force enough to penetrate the skull wall will, in all probability, have gone on through the brain substance, probably striking the opposite wall, and will have rebounded, but in a different course. With the gentlest possible hand a large buttoned light probe should be passed along the path of the bullet as far as it will go without resistance, even as far as the opposite wall. This spot can be "fixed" by sighting, viz., by carrying a string in the vertical and horizontal planes, strictly in a line with the probe as it is "in situ." Where these two lines cut is the spot where the bullet struck the opposite wall. With this spot as centre a horse-shoe flap is to be turned down, the pericranium stripped up by a crucial incision and a circle of bone trephined out.

It may at once be seen that the dura has been injured, or perhaps a dark area beneath shows encephalic traumatism. The dura should now be incised and a second probe carefully finds the bullet, or its deflected track. If found it must be extracted and its bed drained by a tube which, after a day or two, may be daily shortened. The original track may be drained by a leash of silk threads, one of which is extracted daily till all are removed. A moist external dressing, put on with moderate pressure, completes the operation. Let us hope, cures the patient!

II. WOUNDS OF THE ABDOMINAL CAVITY.

Most penetrating wounds will require operative treatment. Wounds made by modern small-calibre fire arms, in the absence of progressively urgent symptoms, should not be treated by laparotomy. Most other wounds should.

While preparations for operation are going on it is necessary to carefully watch the patient.

Should bad symptoms rapidly progress—such as vomiting of blood, internal hæmorrhage, etc.—it is best to hurry, even at the expense of antiseptic precautions. It is better to give the patient a chance to fight sepsis than to permit death from hæmorrhage.

If there is an exit, as well as an entrance wound, and one is bleeding and the other not; or one has a fæcal odour and the other not; it is wisest to attend first to the one where the indications for treatment are the more imperative.

A probe lightly inserted shows the direction of the wound, but it should not be passed entirely through the abdominal wall.

The entire track of the parietal part of the wound is now to be laid open by cutting down layer by layer on to the track. If the exploration shows that the abdominal cavity is actually invaded the wound should be plugged with gauze and another opening through which to work should be made beyond the deeper end of the wound, and in such a direction as is usually elected for abdomen section in the region which is to be explored.

It is well to make this incision at least four inches in length, for now or never one should actually *see* the condition of things and should on no account be satisfied with working in the dark.

If immediately on entering the abdomen a large quantity of clotted and fluid blood is encountered the incision should be at once enlarged to 6-8 inches and the blood rapidly wiped out. If the bleeding point cannot be seen and the hæmorrhage seems to be serious, it is well to eviscerate at once, laying the intestines upon a wet hot towel outside the abdomen, putting as little tension as possible on the mesentery and other attachments. The viscera are to be covered with another towel and frequently moistened with hot saline solution. The points of hæmorrhage will now be seen and tied, or the bleeding controlled by gauze packing, or even a clamp forceps may be left *in situ*, projecting from the wound, and taken out in forty-eight hours, or longer, with great caution.

The gauze packing, if no local or general peritonitis have set in, should not be removed for at least five days, and even then it may

be done at several sittings, first loosening it at one point, then at another, so as to cause no further hæmorrhage, or dragging of viscera into the wound.

The points to remember in suturing the abdominal wall are :—

(a). If the patient's condition is bad, pass the sutures through all the layers of the abdominal wall at once.

(b). If good, suture layer by layer.

(c). Put in all the sutures which pass through the peritoneum before tying.

(d). Keep a gauze pad covering over the intestines till the sutures are being tied.

(e). Keep a finger in, on the peritoneal aspect of the spot being tied, to secure (1) that no gut is nipped in the suture, (2) that the cut edges are in proximity behind as well as in front. This is very important in a stout patient.

Points to remember about perforating injuries of the alimentary canal are :—

(1). It is usually accompanied by considerable shock.

(2). Fæcal odour at the wound is indicative of perforation of the large intestine.

(3). Inodourless gas in the peritoneal cavity points to injury of the small intestine high up.

(4). Vomiting of blood and bloody stools are suggestive.

(5). With suspicion of perforation no enema should be given, lest the fluid should enter the abdominal cavity.

III. INJURY TO URETHRA.

If a case comes to us with a history of recent perinæal injury, and on examination the perinæum is found somewhat bruised and swollen; also some hæmorrhage has taken place, or it may be, is taking place, from the urethral orifice; also there has been, or is, more or less retention of urine; but a catheter can be passed. Should the instrument be tied in, and the patient so treated; or should an external urethrotomy be performed? I recently had to meet this situation, and foolishly followed the former course. The patient did well for a time, but for a little fever and pain in the perinæum. His water passed freely through and at the side of the catheter. But what was happening? Through the torn urethra urine was setting up mischief in the surrounding tissues. Consequently in a few days I was called to see the case and found a deep perinæal abscess and urinary infiltration over the perinæum, scrotum, penis and running up the left inguinal region. This necessitated perinæal section and free incisions in these regions.

It involved much suffering, loss of tissue, detention in the hospital, besides danger to life to the patient. He eventually did very well.

There can be no doubt, if one thinks it out, and after having seen the events which follow expectant treatment, where rupture of the perinæal urethra is present, as indicated by the above symptoms, under all circumstances operative treatment of the nature of external urethrotomy is called for, and the sooner the better. It is a quick, effective, safe, and easily-recovered-from operation. Whether the torn urethra should be reunited, or the cavity around packed with gauze, must be decided by the condition of things found.

Case.—A middle aged man fell astride on to a plank from the height of ten feet.

The accident took place at 4.00 p.m. on the day previous to admission. Between that hour and noon the following day patient passed water several times; at times with blood. His condition on examination was as follows:—

The perinæum was black and blue from tuber ischii to Poupart's ligament; the right side more distended than the left and giving fluctuation. Patient in great pain and distress.

We put him at once under *chloroform* and tried to pass a No. 7 catheter, but failed, although when going under chloroform he passed smoky urine.

Median section came down on a large cavity into which the catheter had gone, containing 2-4 oz. of blood clot. This accounted for the fluctuation in right perinæum. On turning out the clot it was discovered that the urethra was completely severed. There was free oozing from its walls. A soft No. 10 rubber catheter was passed by the meatus and brought out in the perinæal wound, then passed on into the bladder. The two ends of the cut urethra were then joined by silk round the catheter, which was kept in, and the cavity and wound packed with gauze. Primary union did not take place between the two ends of the urethra, but the wound healed up well eventually and the patient left able to pass a No. 7 catheter.

In all cases of urinary infiltration the first step should be an external urethrotomy, just as in an impassable stricture with urinary retention. The use of the catheter follows afterwards.

IV. ACUTE APPENDICITIS.

I can't say I have ever seen a real, acute appendicitis in a Chinaman. Sub-acute I have seen. This makes it all the more important to recall what points are salient ones in the disease. To begin with, the pain is

rarely referred to the cæcal region, but is geueal or centered about the umbilicus.

Much stress is laid on the facial expression as a point of diagnosis. The healthy, or robust look, is suddenly changed to one of anxiety and afterwards of haggardness, with bright eyes, pinched features, drawn upper lip showing the teeth, dusky or slightly jaundiced skin, and dilated nostrils. The patient's friends say he has changed so much ; still his manner is not that of one who thinks he is very ill ; it may be even jocular and light.

Examination of the rectum should never be omitted, no matter how clear the diagnosis may seem. A general, tense bulging, points to tympanites. A local bulging, tender on pressure, points to abscess. An increased tenderness, on the right with no other distinctive changes, points to appendicitis.

If the existence of appendicitis be suspected no opium in any form should be given. As a general rule it is stated that after twenty-four hours, if the patient seems worse, operation should be performed. Early delirium and nervous symptoms, persistent vomiting and the stoppage of flatus, demand haste. If in addition the pulse gets rapid and small, or chills occur, the case is exceedingly grave. When this group of symptoms is present, whether the patient has been ill twenty-four hours or four hours, the only treatment which holds out any reasonable hope of saving life is immediate operation. Before giving *chloroform*, if there has been much vomiting, it is well to wash out the stomach first. This prevents septic matter getting into the trachea and bronchi during vomiting. In acute cases the spot of incision is decided by the location of the tumour or spot of greatest tenderness.

The enlarging of the wound with scissors or blunt bistoury is here particularly to be avoided, since the epigastrics, when once blindly severed, retract and are sometimes far from easy to secure. Valuable time and considerable blood may be lost. By cutting down on an index finger the vessels may be felt, and clamped, and tied before being cut.

Free fluid of any variety in the peritoneum is an unfavourable sign, usually indicating diffuse peritonitis. It calls for enlargement of the wound.

No matter how simple it may seem to isolate an appendix from a mass of adhesions, even when the size, shape and consistency of the tumour render the probability of abscess remote, no attempt at such isolation should be made. Even if malodorous pus is encountered immediately on opening the abdomen it is more than likely that other and more infective material is contained in the mass of adhesions, so

that nothing should be disturbed, or liberated, until every measure has been taken to protect the remaining portion of the peritoneum from infection.

The base of the appendix is usually in a line with that longitudinal striation of the colon opposite the mesocolon.

It is best ligatured with strong fine catgut and the amputated stump cleaned and treated with a drop of pure *carbolic*; then returned into the abdominal cavity. One must not forget that the gauze or sponges, or instrument used to cut the appendix through, are now septic and not to be used again. If, when the adherent mass is "walled off" securely, an abscess is opened, the pus as it wells up should be wiped up by gauze pledgets, which are to be thrown away. Then the remaining adhesions are broken down and the cavity well cleansed with gauze and peroxide of hydrogen. If the appendix is so matted that it cannot be removed the whole of its mucous and lymphoid tissue should be scraped away and then the cavity packed with gauze.

No gangrenous tissue should be left behind. If the cæcal walls be infected and necrosed these spots should be excised and sutured up. If the omentum be thrombosed or infected with gangrene this should be ligatured with numerous fine catgut sutures through healthy tissue and the infected portion removed.

It may happen that a friable appendix, perforated at its base, comes away on slight traction and the cæcum is fixed firmly by adhesions, so that the fractured surface cannot be got at to deal with it. What should be done? A gauze packing laid firmly against it will, in all probability, prevent fæcal leakage, though fæcal fistula will probably follow. These, as a rule, heal spontaneously.

Where there has been much suppuration in the abdominal cavity, it is unsafe to conclude the operation without paying attention to the pelvis where a collection of septic material may be. If this is found to be so, sponge after sponge is to be used to mop it out and finally a drain left in.

One of the most suitable drains is a strip of gauze wrapped in gutta-percha tissue, the thickness of one's ring finger. Gauze alone sticks to, and drags upon, adjacent structures when removed. The tissue will not, but comes away easily.

Such are a few points and advised methods of procedure in a few emergency cases.

Much of my matter has been culled from books, particularly from Lilienthal's work on Imperative Surgery.

ACUTE NON-SUPPURATIVE INFLAMMATION OF THE LIVER.

By JAMES L. MAXWELL, M.D.

In this short paper I should like to draw the attention of readers of the JOURNAL not to any new disease, nor indeed to any novel facts about this disease, but only to claim a closer attention to the complaint as a morbid entity.

There are probably few subjects more inefficiently dealt with in our text-books of medicine than this of hepatitis.

In a typical English text-book—Frederick Taylor's—the whole subject is dismissed in five lines; the reader being referred to the article on Abscess of Liver.

In such a first class American book as Osler's Practice of Medicine no mention whatever is made of the disease.

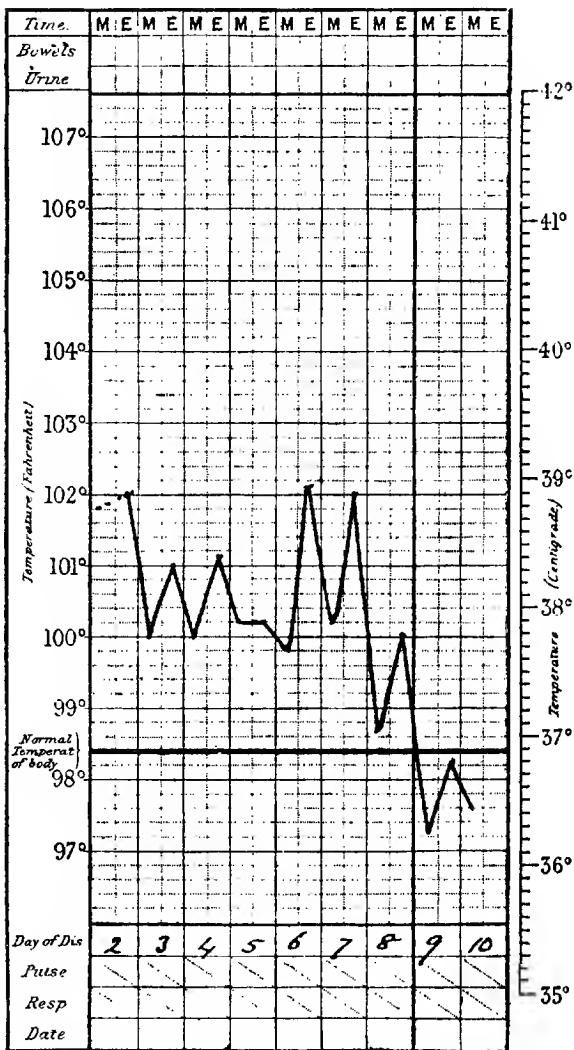
In Allbutt's System of Medicine, probably the finest book of its kind in the English language, the subject is in no way properly differentiated from tropical abscess of the liver; practically all non-suppurative cases being put down to a malarial hepatitis.

The tropical text-books of medicine leave us in the same confused muddle. Scheube mixes the subject hopelessly with that of tropical abscess. Manson, though giving us under the heading of tropical liver a much better idea of the disease, appears to ascribe all its symptoms to an active congestion of the organ.

My contention is that we should recognize an acute hepatitis which cannot, on the one hand, be confounded with simple congestion, though its etiology is very similar; while on the other, it is not associated with dysentery and has no tendency to pass on into abscess of the liver.

The disease has a definite acute onset, followed by a febrile period and a period of defervescence, followed by complete convalescence. I will proceed at once to give two typical examples of this complaint that have been under my care here and then will try and compare them briefly with congestion on the one hand and acute suppurative hepatitis on the other.

Case I.—X. Y., male, aged 36, born of English parents in the tropics. The patient has spent practically all his life in the tropics. By occupation a merchant in good position.



DISEASE.
Acute Hepatitis.

Name { X. Y.
Age 36.

Temperate in the use of spirituous liquors, but inclined to excess in the ingestion of rich food, living an almost completely sedentary life and taking practically no exercise at all.

Has once only, several years ago, suffered from a fairly severe attack of malaria, otherwise may be said to have been almost completely free from "fever," a remarkably rare thing in this region. Suffered from a sharp attack of dengue a little more than two years ago. He had never suffered from dysentery in any form whatever and could not recollect any severe attack of diarrhoea.

On May 22nd, during the night, or rather in the early hours of the morning, the patient was seized with an attack of acute pain "in the stomach"; the pain being of stabbing nature and passing through to between the shoulders. It was relieved to some extent, but not completely, by vomiting. The patient considered the attack one of acute indigestion from some error in diet, and living at a distance from me merely sent a request for some medicine to meet this trouble. On the following day I met him, but he declared then that the sickness was over, though he still felt rather shaken. I made no examination, as we met only at a friend's house. His wife told me that she thought he had been very feverish the night before. That evening he had a second attack in all points similar to the first, except that vomiting did not occur and the pain was not relieved by the morning when I was sent for.

The temperature—see chart—was then 100° F. and varied between that and 102° F. till the eighth day of the disease, when it fell rapidly, reaching normal on the ninth day and not subsequently rising above that point.

When I first examined the patient on May 24th he complained of great pain in the abdomen of a stabbing nature passing through to between the shoulders. On examination, the right rectus abdominis muscle was contracted and hard, the whole area over the liver was very tender to the touch. The liver itself was considerably enlarged, extending three fingers' breadths below the costal margin. The pulse was steady and of good volume; 76 beats to the minute. The face was a little sallow and there was a trace of jaundice in the conjunctivæ. The urine was free from albumen, but gave a faint reaction of bile pigments. The patient was inclined to be constipated and the fæces were very highly coloured with bile. The treatment exhibited was a large mustard plaster over the liver, which gave great though rather temporary relief, and a calomel purge followed by regular doses of salines.

The pain, though relieved for a time by the mustard plaster, recurred the same evening to a less severe extent, but enough to require the hypodermic use of *morphia* before sleep could be obtained. A very low diet, as near starvation as practicable, was ordered.

The treatment was followed by a rapid improvement in the pain and tenderness with steady reduction in the size of the liver. On the fifth and sixth days the patient complained of very severe neuralgic headache, but otherwise was decidedly better, and, as stated before, the temperature reached normal again on the ninth day.

Case 2.—Chhoa Lam, a Chinese woman, aged 37, was admitted to the Tainan Mission Hospital on the 29th February 1904, suffering from "fever," jaundice and acute abdominal pain. The history given was that she had come back from her father's home in the country two days previously and believed herself to have caught a chill on the way home. She had on her return been suddenly attacked by fever and pain in the abdomen. She had been to her home to join in family festivities. With regard to previous illness she had from time to time suffered from attacks of malarial fever, a disease absolutely ubiquitous here, but never had had a very severe attack and was quite certain that she had never suffered from dysentery, though occasionally she had been troubled with attacks of diarrhoea.

On admission her temperature was 103° F. She complained of great pain over the liver, which was markedly enlarged. She was also markedly jaundiced, with bile in the urine and with an increased amount of bile in the stools. The temperature continued between 101° F. and 103° F. for ten days, and then fell to normal; the liver gradually receding to its normal size.

In addition to these two cases, which I mention as fairly typical ones of the disease, I have also seen several others in Chinese patients. Now examining this disease more closely it will be seen that in etiology it is closely allied to congestion of the liver, that is to say, the main elements seem to be a tropical climate, either a habitual or a temporary ingestion of an excess of rich food and a sudden chill. On the other hand, if simple congestion or indeed simple hyperæmia of an organ can give rise to considerable fever and acute pain our use of pathological terms is meaningless. Does congestion or hyperæmia do so in any other organ? Pain it may cause to some extent; I believe never so acutely as this; and considerable rise in body temperature it certainly does not. Then why should we allow that it can do so in the case of the liver? I think that the supposition hardly requires discussion.

On the other hand, if we turn to the question of a differential diagnosis from acute suppurative inflammation of the liver, we raise a different question and one more difficult to settle. The proving of a negative is always impossible, and it is equally impossible to *prove* that such an inflammation as this might not pass on to abscess of the liver. But even supposing this to be so, is that a sufficient reason to refuse an entity to this complaint? Surely not. Take for example inflammation of the Fallopian tubes. A simple plastic inflammation is common and a suppurative inflammation is also common, yet although in some cases a simple inflammation may pass into a suppurative one we do not therefore deny the identity of the one or confuse it with the other. If all diseases were classified by their bacterial origin it might be difficult to distinguish, but as our text-books go at present they are classified by clinical characteristics, and in that case there is no reason to deny the clinical characteristics of the disease here pictured.

Further there are etiological differences. As shown in these two cases, and in others I have met, there is no connection between dysentery and this form of hepatitis, and further there is, I believe, no connection between malaria and this form of hepatitis.

As far as the symptoms themselves go, it is so seldom that one gets a chance of seeing abscess of the liver till the case is well advanced that it is difficult to compare the two diseases; but does not this in itself speak in favour of my contention? Were there the continued high fever and the acute abdominal pain which characterises the inflammation of the liver about which I write, would the cases be so late in applying for medical assistance? Again and again I have operated on abscesses of the liver, containing on several occasions gallons of pus, and yet found it impossible to get anything but a vague history of the commencement of the disease. On the other hand, I have treated about half a dozen cases of the disease I now refer to, and in each instance have seen the temperature fall and the liver retire again to its normal size.

It would, I recognise, be a mistake to be too dogmatic on this subject, and I would close by pleading that a more careful attention be given to this disease, believing that if this is done the subject of hepatitis will be placed on a more satisfactory basis.

REVIEW OF A PAPER BY H. BROOKMAN WILKINSON, M.D.,
 "LEPROSY IN THE PHILIPPINES, WITH AN ACCOUNT
 OF ITS TREATMENT WITH THE X-RAY."

O. T. LOGAN, M.D., Changteh.

Any new treatment for leprosy is eagerly sought for by those who are thrown in contact with this class of patients, but it is feared that most of us are becoming very skeptical of any sort of treatment as offering any more than temporary relief. The paper under review certainly gives hope to those who may be able to carry it out in selected cases.

Speaking of the transmission of the disease the paper says: "We find that for several years past there has been only one case where a husband and wife have been known to have the disease, and in this case the disease appeared at the same time in both, indicating a common origin rather than a transfer from one to the other.

"Of numerous children born in the Philippines of leprosy parents (seven in this hospital, three having both parents leprosy, but not married) none have been known to suffer leprosy.

"I have been able to locate five cases in which a parent and child have both had the disease, but the development occurred toward the end of the child's adolescence, appearing about the same time in both parent and child; the child developing the disease first in three cases and the parent first in two cases, thus indicating common origin and not transmission from parent to child.

"From these facts I am inclined to believe that the disease is rarely, if ever, transmitted from parent to child and is with difficulty transferred directly from one person to another, but there frequently exists a common source of infection to which the members of the same family may be subjected, especially during early childhood."

The author of the paper objects to the prevalent classification of cases and calls all cases "hypertrophic," that show "tubercles and nodules or mass and plate-like increase of tissue" while the term "atrophic" is made to describe "those cases showing scars and glossing of skin, anæsthetic patches, wasting away of fingers and toes". With this classification the reviewer heartily agrees and ventures to say that many have been misled by the old terms; still, as the signs of the disease are so variable, it is doubtful if any set of terms will describe the lesions satisfactorily to a beginner.

The experiments included thirteen cases and covered a period of nearly two years. Three of these cases were cured, seven improved and

three not improved. There is no reasonable doubt that one case was cured of his leprosy, for repeated examinations showed lepra bacilli before and during the earlier part of the treatment, while during the latter part of the treatment and at autopsy no bacilli could be found, and Dr. Herzog, pathologist of the Government laboratories, Manila, concluded his report, after examination of sections of the nerves and all the organs of the body, by saying: "Neither the histologic, nor the bacteriologic examination in this case furnished any evidence at all that the patient at the time of his death was suffering from leprosy, either cutaneous or internal."

It seems a pity that this patient was killed by the treatment that cured him, but such was found to be the case, as will be seen later in the explanation of the effect of the X-ray. Still the fact of the cure could have been proved in no other way. The two other cures are positive so far as signs, general health and microscopic findings from scrapings from the skin of the formerly leprous lesions are concerned.

Answering the question of how the X-ray operates, Dr. Wilkinson says: "I am inclined to believe that when a local lesion of leprosy is treated with X-ray, the organisms there localized are killed and their bodies absorbed by the system, thereby producing an immunity against the living organisms. This, as may be seen, would be practically analogous with the immunization of individuals against bubonic plague by the injecting into them killed cultures of plague organisms. In our case we simply grow the culture of lepra bacilli in the human body as a culture medium and then kill them by the use of X-rays.

"In support of this theory I cite the following facts:—

"*First.* The treatment of one leprous spot on a patient produces improvement in spots at a distance from the one actually treated.

"*Second.* The cure in the distant spots seems to progress parallel to, and to be just as complete as in the one treated.

"*Third.* The best results seem to be obtained only when treatment is pushed to the point of killing or beginning to kill the tissues, which would also probably be to the point of killing the organism.

"*Fourth.* Cases in which there are massive localized leprous deposits are most rapidly improved: as in these cases, we have an abundant culture on which to operate and thereby produce immunity more rapidly.

"*Fifth.* In diffuse general involvement of slight degree, or atrophic character, where there are only a few scattered organisms we have had little success.

"*Sixth.* In two well advanced cases in which the amount of new leprotic tissue was excessively great, the improvement was marked and rapid, but followed by loss of general health and rapid physical decline. This may be an over dosage, so to speak."

The paper concludes with discouraging remarks on the difficulties in keeping the X-ray machine in repair and efficiency owing to the distance from the source of supplies and the lack of skilled men to do the repair work. These appear so great that there seems little use for any but those who may be specially favored as to location and who are not rushed with work.—*The Journal of the American Medical Association*, February 3rd, 1906.

REPORTS OF CONFERENCES.

KULING MEDICAL MISSIONARY ASSOCIATION ANNUAL REPORT, 1905-1906.

It is with pleasure and encouragement that the First Annual Report of the above is presented. The difficulties and problems connected with this, as with every other newly constituted association, have, by the hearty cooperation of its officers and members, been either overcome or solved.

It must be confessed that at its inception there were signs and symptoms of pessimism, but with careful and vigorous purification, by "better sanitation" of evil and unwarranted forebodings, timely "management of difficult labour," with ideal methods of "hospital and dispensary management," ably assisted by "hospital and dispensary assistants" and "other little things that helped," such symptoms and signs have disappeared, and we now have the joy of beholding "the construction" of a powerful, healthy and permanent Medical Association in Central China.

At our first meeting we had a membership of twelve, but at the sixth meeting the forty-third member was enrolled. They hail from all parts of China. Thus it proves to be a unique opportunity for the fraternising of medicos from the various spheres of work, and also the different schools of theory and practise. Yet their one aim is the salvation of the Chinese by the Christ-like means of alleviating their sufferings. Besides the interesting and instructive papers read, with discussions which followed, some very needful and good work has been done by the Association. Most of the suggestions

for the better sanitation of Kuling have been accepted by the Kuling Council and are to be enforced next season.

Also, a number of suggested topics for discussion at the Shanghai Medical Conference 1907, have been forwarded to the Council.

We cannot close this brief and imperfect report without acknowledging the kind hospitality of the ladies who have provided refreshments at the close of our meetings.

W. ARTHUR TATCHELL,

23rd August, 1906.

Hon. Secretary.

BRITISH MEDICAL ASSOCIATION—74TH ANNUAL MEETING, TORONTO.

DEAR MR. EDITOR: Thinking perhaps you might be interested in a few lines bearing on the British Medical Association now meeting in Toronto I venture to send you the following general remarks. The assembly is a large one; fully 2,500 physicians are present and many of them are accompanied by one or more members of their families.

The opening meeting was a splendid beginning to a series which is growing in interest. Before any proceedings began at this meeting the President-Elect was seen wending his way in and out among the vast audience, and in response to each stop and whispered word a well-known and hoary-headed clergyman of local reputation arose and went to the platform, where his presence seemed to give the completing touch to the robed and uniformed assembly of leading lights in the British and American medical professions. With bowed heads God was acknowledged as the Giver of every good and perfect gift and His blessing invoked upon the seventy-fourth annual gathering and the medical profession throughout the world.

One of the vital utterances of the first day was made by the newly-elected President, Dr. Reeve, who is a Canadian, when in reply to the Mayor's statement that the people of the Dominion were expecting some great and striking pronouncement regarding advance in medical science or some great discovery, he said: "No, they will be disappointed; such advances are not regulated by great conventions. They more often come silently. They grow as the tree grows, imperceptibly and only as the result of patient and painstaking labor." State medicine is taking a large place in the deliberations. Discussions on milk and water supplies, tuberculosis among the poor, infant mortality, etc., are worthy of note. The section on tuberculosis constituted a valuable symposium, and while it was confessed that no real advance in therapeutic agents had been made during the past twenty years

yet much is being done by the better application of long known methods, and preventive treatment is yielding most encouraging results. Tuberculin in any of its forms is looked upon as a questionable remedy for the human subject, while conformity to the laws of health, good sanitation, housing and feeding, combined with open air treatment, are of unquestioned value. The New York City Health Department, with its compulsory sanitary legislation, dispensaries, kitchens, public disinfection, notification, and educational methods, leads the world in the crusade against the white plague.

In medicine Sir Jas. Barr's address on "Circulation, viewed from the peripheral standpoint," was an original and masterly presentation. The presence of the kindly and clever-looking physicians of the King—Broadbent and Barlow—was greatly enjoyed.

Sir Victor Horsely from the start was a prime favorite. Humble in demeanor and plain in attire, one had only to hear his words on the subject of his choice to be deeply impressed with his inherent worth and mastery in a difficult field. His formal address on "Surgery of the Nervous System" was by all odds the most striking and lucid paper before the Association and indicated among other things a mastery of detail, an unhesitating daring in dealing with vital centres and withal a wise conservatism and extreme gentleness in carrying out technique.

The American visitors were numerous and were received with warm cordiality, and while not attended with that touch of romance and historical interest associated with some of the English men of science, yet on platform and floor they showed themselves second to none in real worth and achievement.

Speaking at a mid-day banquet to-day Sir Victor Horsely took very strong grounds in favor of discouraging the use of alcohol in the surgical wards. Prof. Woodhead, of Cambridge, supported this view. That alcohol as a therapeutic agent is going out of use in medicine, as well as in surgery, was supported by the testimony of Drs. Varey, of Boston, and Murdoch Cameron, of Glasgow, who stated that hot water and milk had been used with advantage. Horsely showed that in seven great London hospitals the annual expenditure for alcohol had decreased in forty years from forty thousand dollars to fifteen thousand, while the annual expenditure for milk in the same interval had increased from fifteen to forty thousand dollars, and this divergence in the scale of expenditures was yearly increasing. In the Royal Infirmary at Salisbury the annual expenditure had fallen from fifteen hundred to thirty-five dollars. In the pathological

museum unstinted admiration was heard for the beautiful and natural appearance of specimens exhibited by the Boston medical school. The gelatine employed obviates the inconvenience of the various liquid preservatives.

In conclusion may I say that after listening to the valuable discussions of this gathering one feels more jealous for the reputation of our loved profession in China. To be more accurate and painstaking in our work in China will surely not make us any less *missionary* in our aims. While not wishing to censure, for there are many questions involved, one can only deprecate, for example, the practice of employing inaccurate and cheap therapeutic agents, whatever their source. Better administer less medicine to fewer patients where we have not the best and most scientific at hand. Moreover, for the sake of the patient, adequate and accurate records of our cases should be kept for study and consecutive treatment, for, to say the least, it is only in this way that fresh interest is maintained and frequent good results attained in our work. To the medical missionary any other practice tends inevitably to superficiality and thriftlessness which the Great Physician cannot approve. (Well said ! adds the Editor.)

H. G. BARRIE.

PEI-TAI-HO NEWS.

On 28th July a meeting of fifteen medical missionaries was held to consider matters in regard to next year's Conference. Dr. Christie occupied the chair. The subjects discussed and questions asked outside the business of the day, clearly indicated how necessary and helpful it is for us to meet together from time to time. Dr. Christie, in a few words from the chair, emphasised the high calling of our medical work and pointed out the dangers involved in the methods adopted towards self-support.

It was resolved to form a North China Branch of the Association, including Korea, and Dr. Hopkins was appointed convener for the meetings to be held next summer.

3n Consultation.

TAINAN MISSION HOSPITAL, FORMOSA, }
 10th August, 1906.

DEAR MR. EDITOR: I am delighted to see the opening of the JOURNAL to "consultations." It should be a great help to those of us working alone and where one seldom can meet with medical confrères. Here is a case I had under my care lately, on which I should like further opinions.

A Chinese woman, aged thirty-seven, came under my care suffering from an ovarian cyst. I performed the usual operation and removed a left unilocular ovarian cyst with the tube of the same side which was converted into a hydrosalpinx, no opening between the two. On examining the right appendages I found the ovary perfectly healthy, but the tube again converted into a hydrosalpinx. Should I have dealt with the right appendages, and if so how? I left them alone, but am not quite satisfied that I acted wisely.

I remain,

Very sincerely yours,

JAMES L. MAXWELL.

DEAR SIR: I have read with great interest Dr. Plummer's "In Consultation" letters, and though I can do nothing to answer his questions, they raise in my mind several difficulties which I have found in somewhat similar cases. I should like to bring these forward with a view to obtaining guidance in the future.

I find very commonly here cases of sinus in the thigh, generally of very old standing. A few reveal bone on probing, and these are fairly straightforward, but usually I have not been able to find any.

In these cases if the sinus is opened up freely, it is generally found to turn shortly on itself several times, dissecting up the muscles of the thigh, the various tracks ending blindly. Sometimes I have found one deep track passing apparently under Poupart's ligament. A clue to some of these cases is given by two cases which came in with a large unruptured abscess among the thigh muscles. These were opened; in the first one by several small incisions, but as months later these were still unhealed, the whole was freely laid open; and this was also done in the other case. Both healed in time from the bottom when kept

freely packed, but the failure of the first operation shows how cases of chronic sinus may arise.

I do not think, however, that these cases explain the ones where a sinus passes under Poupart's ligament, though the extensive tracking in the thigh does not seem likely to have followed a Psoas abscess, and there is no apparent origin for one to be found.

I would like to ask :—

1. What is the probable origin of these abscesses, to which the history gives no clue? I may add that *potassium iodide* does not seem to influence them at all.
2. What is the probable origin of the cases with a sinus passing under Poupart's ligament?
3. In operating upon such cases how far is it advisable to lay the sinuses open regardless of structures divided, especially the larger muscles; and should they be followed beyond Poupart's ligament or wherever they may go to? Also what is the best method of dealing with hæmorrhage, often very profuse, from the chronically inflamed tissues divided?
4. What is the best general treatment for bone cases of a very chronic character where the whole body seems diseased?

I have had cases where a sequestrum or some caries have been treated, as I believe thoroughly, which will not heal up, and where pustular rashes, corneal ulcers and the like keep recurring. Also one of the men with abscess in the thigh referred to above, who ultimately healed well, has since returned with a similar abscess in the forearm.

I have tried all sorts of constitutional treatment, but without any effect.

Yours truly,

HUGH H. WEIR.



Medical and Surgical Progress.

Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

Spread of Leprosy by Insects.—*Journal of Tropical Medicine*, June 1st, 1906. Dr. W. T. Goodhue, superintendent of the Molokai Leper Settlement, states that he has found the bacillus lepræ in the female mosquito—*Culex pungens*—and in the bed-bug—*Cimex lectularius*. The fact that the leprosy bacillus has been found in insects is not, we believe, new; what we are anxious to know is whether these insects play a part as intermediate hosts, and what cycle of evolution, if any, takes place in their economy.

Studies in Plague.—*Journal of Tropical Medicine*, August 1st, 1906, by Professor Dr. Camillo Terni. We reproduce the conclusions in which Professor Terni summarises his article.

1. In the plague hospital of Rio de Janeiro the mortality of the patients treated with anti-plague serum only, remained between twenty-five and thirty per cent. according to the cases and quality of the sera inoculated. But we must remember that in the statistics in favour of serum therapy are included the mildest cases which ordinarily recover without cure. The estimation of the curative effect of the specific anti-plague sera is very uncertain also on account of extreme variableness of the dose in identical cases. Serum is absolutely of no efficacy in the septicæmic type of plague and in *pestis pneumonica*.

2. The inefficacy of the anti-plague sera which are actually used as a means of cure depends on the

deficiency of their anti-bacterial power and on the almost absolute want of anti-toxic substances, because the animals used for the preparation do not readily assimilate and destroy the poisons of the plague bacillus and do not accumulate in their blood sufficient quantities of anti-bacterial and anti-toxic substances for the cure of man.

On this account we obtain the best results for the serum therapeutics in plague from immunising mules, asses, or oxen, and inoculating them with the juices of the pathogenic products of the animals infected with plague, instead of artificial cultures.

3. With the intra-venous inoculations of *corrosive sublimate*, proposed by Bacelli, the mortality oscillated within almost the same limits as those afforded by the specific sera, that is, between thirty to forty per cent., and this curative method must be recommended, before any other, when we have not at our disposal freshly prepared sera, and when it is not possible to practice the surgical treatment at a sufficiently early period in the illness. The corrosive sublimate acts as an efficient stimulus of the phagocytosis and offers the advantage that it is within every physician's reach, even in regions where we cannot always hope to have at our disposal other medicaments difficult to prepare, such as sera. It is known also that *mercury* fixes itself by preference in the lymphocyte of the lymphatic glands and in the plasma, and in this manner sets up an unfavourable condition for the development of the plague bacilli in the tissues

which this infecting germ prefers. For this reason I think the use of *mercuric chloride* preferable to *carbolic acid*, especially in cases in which we can already demonstrate the presence of the bacilli in the blood.

4. In the grave cases in which it is not possible to expect a success from the serum therapeutics or from other local cures, there remains as the only rational resource the extirpation of the buboes.

I consider the extirpation of the bubo preferable to all other local cures. The simple incision of the bubo, with the evacuation of the pus, has good results, but has not so rapid and durable an effect in arresting the course of the infection as when the bubo is completely extirpated.

Compresses of tepid disinfecting solutions are indicated locally, in order to limit the diffusion of the process when the bubo is removed and the injection of solutions (*mercuric chloride*, 1-1,000; *carbolic acid*, 1 to 2 per cent.) around the area occupied by the bubo, especially when from the surrounding oedema, and from the adhesive peri-adenitis we may infer that there is a combined action of the plague bacillus, together with other bacteria. It is also useful to have recourse to these means when the radical operation is not possible or too long delayed.

All other local treatments must be considered more pernicious than useful, because they cannot exercise any action on the bacilli located in

the tissues of the lymphatic gland, as we thereby lose precious time.

It is an unpardonable mistake to wait for the suppuration of the bubo before we decide upon surgical intervention, because the patient succumbs either on account of the rapid progress of the infection, or from the effect of the toxic products which cannot be neutralised by the curative action of the serum. We must not take into serious consideration either the constitution of the individual, nor pay too much regard to the resistance of the patient; whilst the bubo remains the probability of cure becomes always more remote, the operation has to be performed under much graver conditions, because the extension of the infiltration destroys the anatomic relations of the region and complications, such as phlebitis, lymphangitis, ichorous infiltration along the muscular sheath, with the danger of an effusion into the cavities, are more likely to ensue.

If it is not possible in the patient's house to provide for the surgical treatment, we can at least give intravenous inoculations of specific serum, or of *mercuric chloride*, and subsequently bring the patient under better conditions to the hospital.

I may affirm, with all confidence, that if plague is treated by the above indicated method, the mortality will be reduced to the condition and to the limits of the other infectious diseases generally considered much less grave in their effects.

The China Medical Missionary Journal.

VOL. XX.

NOVEMBER, 1906.

No. 6.

Editorial.

We take pleasure in announcing that Dr. Edward H. Hume, of the Yale Mission, Chang-sha, has accepted the responsibility for the Department of Medical Progress.

The Editors request that two copies of all hospital reports be sent to them. If you have not already done so please do so at once and keep on doing so for all future time. Also (we say it with diffidence) please put on sufficient postage.

We owe an apology to Dr. Logan for allowing two cuts of a former paper of his to creep into his article on "An Undescribed Form of Ascaris, etc.," published in our last issue. The cuts referred to are on page 193, and have nothing whatever to do with the subject of the article. It is a pleasure to note at the same time (speaking of Dr. Logan) that his excellent work along his hobby of intestinal parasites is fully recognized at home. The last issue of the John's Hopkins Bulletin refers to his work with considerable interest and speaks of the Doctor as an enthusiastic collector.

NOMINATION OF OFFICERS FOR 1907-8-9.

<i>President</i>	-	-	-	
<i>Vice-President</i>	-	-	-	Dr. J. C. McCARTNEY,
<i>Editors</i>	-	-	-	{ Drs. C. S. F. LINCOLN and
<i>Treasurer</i>	-	-	-	{ W. H. JEFFERYS.
<i>Secretary</i>	-	-	-	}

"The Nomination Committee have found difficulty in filling up the Presidency. Next year being conference year, it is important

, 1906.

Dr. C. J. DAVENPORT,

Secretary of the China Medical Missionary Society,

Shantung Road Hospital, Shanghai, China.

DEAR SIR :

Please take note of the following vote for Officers of the Association for the term beginning January 1st, 1907 :—

President

Vice-President

Editors of the Journal (two) }

Secretary and Treasurer

Very truly yours,

Station.

that the President should be able to be present, able to preside well, and able to give a rousing address to our members. Who can well fill the post? Will members decide and promptly let the secretary know."

The Secretary sends in the above nominations for the Officers of the Association for the coming years. The meeting of the Nominating Committee was held in Shanghai, and it was decided at that time to leave the choice of President open to the Society at large, also the other important office of Secretary and Treasurer. The reason for this change from the usual procedure is not quite clear. It was either that the committee wished to give the Society the opportunity of selecting its own President, etc., without advice, or else it was because the meeting, with one exception, wished Dr. Davenport to accept the nomination, and he, the exception, being present, was too modest and too delicate to allow the committee, of which he was a member, to nominate him. At any rate no nomination was made and the office is open to the man in good standing who shall have the most votes.

The JOURNAL, however, is an "obstinate juryman" and is going to vote still for Dr. C. J. Davenport, partly because he is the real choice of the committee, but chiefly because he has shown more true interest in the Association and written more for the JOURNAL than ninety-five out of every hundred of the members. Then he lives in Shanghai, where we can get at him as we frequently see fit to do. Dr. Davenport is one of our best surgeons, a member of the L. M. S. and a good talker, and will make a splendid presiding officer next spring. He is known to nearly all of us personally and to every one of us by "ming-sang."

About the secretary, we do not know; but Dr. Booth or Dr. Cormack would do it well if they should be elected and accept. The Editors have allowed their names to go down once more and probably for the last time. It will be high time for new blood in another year or two even if the Society does not already think so. There are men *even younger* than the present incumbents who will do the work *even better*.

A voting blank will be found in this issue.

1907 CONFERENCE.

The Secretary sends in the following :—

Date. April 19, 20, 22, 23.

April 19. Business, reports, and general subjects.

„ 20. Surgical Section.

„ 22. Medical Section.

„ 23. Sanitation—skin, eyes, gynæcology.

On Monday night, 22nd, it is proposed to have a social gathering, at which lantern slides of any interesting and rare diseases will be shown. To this end Dr. Butchart would be glad to receive from members any negatives or photos of interest. Address Lu-chow-fu via Wuhu.

Subjects for papers already suggested :—

(1). Does the Association fulfil its duties in regard to the progress of scientific knowledge ?

(2). Necrosis of Femur.

(3). Aseptic and antiseptic surgery as applied to our conditions and circumstances.

(4). Sanitation in and for Chinese cities.

(5). Abuse of quackery in foreign medicines.

(6). Open air sanatoria and need for co-operation in the same.

(7). Four papers on China fevers from N., S., W., and Central China.

(8). Need for strong union medical schools.

(9). Need for uniform text-books.

(10). Hospital construction.

(11). Surgical fevers.

(12). Syphilis in China.

(13). Gynæcological practice in China.

(14). Use of the microscope in our work.

Will members express their opinions on this list, make further suggestions, and suggest writers for the above subjects ?

SIGNED EDITORIAL.

I have been asked to write a signed editorial, and after some considerable thought, I have concluded that it shall be a suggestion that I think will help the greatest number of my fellow-missionaries. The suggestion is that there be more Branches of the China Medical Missionary Association formed. Any of us who have subscribed for the JOURNAL for a number of years will acknowledge our indebtedness to the Central China Branch of the Association, and those who have been more fortunate, as I have been, to attend some of the meetings of this Branch, will look with pleasure on those visits

and with admiration upon the men—busy men they all are—who have had the courage and have forced themselves to take the time to keep these meetings going. The Editors of the JOURNAL have more than once expressed the above sentiments, even going so far, if my memory does not fail me, as to say that the main thing that had kept the periodical alive was the papers that came from this Branch.

At Kuling, three years ago, some of the doctors got together and decided upon having weekly meetings to discuss informally the problems of the work. These meetings have grown in favor and the attendance has steadily increased until it was decided last year to organize formally as a Branch of the Association and have a programme for each week during July and August.

What has been done at Hankow and Kuling might, I am sure, be done in other cities and summer resorts. The gain to the individual and to the profession is hard to overestimate. It is true that it will take a little time to arrange the meetings, and it may be difficult to get papers, but if it is understood that no epoch-making papers are expected and that it is preferable that the paper should be the outcome of the work of the former year or years, it will require but a little while to prepare such papers, provided one carries a vest pocket note book and jots down interesting matters and keeps a few notes on his interesting cases. Some will be willing to open discussions, but would not be willing to write papers. This is just as profitable to the meeting as a paper would be, providing the one who opens the discussion has made notes and follows them, but it seems to me that such a one robs his brethren, especially those who work in out of the way places, of something that is due them, even though the matter may seem very simple and commonplace. It should be remembered that in medical papers, as well as in sermons, the simple ones are the ones that are likely to do most good. I have presupposed that the reader of a paper would always send it to the JOURNAL. The editors, not ourselves, are the ones to judge whether a paper is fit for publication or not. I dare say that few are refused.

Here endeth my first "signed editorial." If it is published, and I hear of new Branches springing up during the next year or so, I shall perhaps try my hand on some other burning issue.

O. T. LOGAN.

Hospital Reports.

The report for last year must necessarily be short, for the work done can hardly be represented on paper. The

Report of the Eng-chhun Hospital, 1905-1906.

hospital has only been open a bare five months, owing to its rebuilding, and the accommodation has been of the worst, so that the figures of the year are very small. With regard to these, however, it must be borne in mind that no trivial cases were admitted as in-patients, and hardly an operation performed that was not urgently needed or that could be in any way postponed.

For the greater part of the year the dispensary, consulting room, and operating theatre, consisted of one room about eighteen feet square, and naturally one was somewhat cramped. But all that is now, one is thankful to say, a thing of the past, and the fine new hospital which, God willing, will be opened on the 5th of December, will enable the work to be carried on under proper conditions. Practically all the hospital staff have lent a hand from time to time in this work, but two especially amongst the students have been the doctor's right hand. These two—Teng Tsam and Pok Liam—should qualify at the end of this year, and it is hoped that one of them may stay on as a permanent assistant. Spiritual results are always difficult to tabulate. This year the work going on in the hospital has been very little, for there was no place for the patients to meet in for worship, and they were discharged at the earliest moment to make way for others. And as there was no proper accommodation, I have declined to

undertake the cure of opium smokers. The second hospital cook has acted as a colporteur in the hospital during the year, and, on out-patient mornings, Koan, who was the head of the secession and who used to be the old hospital colporteur, has taken part in the same work.

By the time next year's report is due one hopes that the new hospital will be in full swing and that it will be possible to give a fuller account of the work.

REPORT ON THE OPERATION WORK.

The hospital was open in part only, and only for five months of the year.

General operations, 78.

Eye operations, 17.

Obstetric operations, 5.

Dental operations, 50.

Anæsthetics.—Chloroform, 48.

Ethyl chloride for general anæsthesia, 10.

Cocaine, 13.

Cocaine and adrenalin for injection anæsthesia, 1.

Eucaine and adrenalin for injection anæsthesia, 2.

Amputations.—Arm just below shoulder, 1.

Growths removed.—Nasal polypi, 3.

Spindle celled sarcoma of abdominal wall, 1.

Round celled sarcoma of thigh, 1.

Epithelioma of scalp, 1.

Epithelioma of elbow, 1.

Papilloma of gum, 1.

Large ranula, 1.

Removal of foreign bodies.—Calcified fibroid from vagina, 1.

Urethral calculus.

Foreign bodies in nose, 2.



CHEN-CHOW-FU (HUNAN) MEN'S HOSPITAL.



CHEN-CHOW FU WOMEN'S HOSPITAL,

Eye.—Cataracts, 4. Only those blind in both eyes done.

There were four deaths in the hospital during the year: two from phthisis, one from fractured spine and one from a cause unknown.

P'ANG-CHUANG, TE-CHOU, VIA }
TS'ING-TAO, CHINA. }
September 24th, 1906. }

Our medical work here at P'ang-chuang has taken no vacation this summer. In these four months there have been 220 patients in the hospital, and as many more relatives and friends, to say nothing of nearly 1,000 dispensary treatments, proving that the sick are always within. Those who are physically hopeless appeal especially to us.

Since we were too busy to duplicate the hospital report last spring, I will add that there were 603 hospital patients last year and 6,174 dispensary patients. The number of surgical operations was 496, and the casting up of accounts shows that *twelve dollars* support a bed for a year, including medicines and other care. Patients furnish their own food and bedding, except where poverty prevents. Perhaps twenty or twenty-five occupy a "bed" in a year. The appreciation of the patients is ample return to the many friends who make possible their spiritual and physical betterment.

We are very grateful for peace within and without China's borders. We have been in China nearly four years, and yet the only thing that makes us feel old is the constant stream of commencement and other announcements which tells of our former pupils acquiring degrees, honors, and positions in life. It is well, and there is room for many of them in China.

FRANCIS F. TUCKER.

Carlyle, commenting upon the statement of a mathematician as to the amount of force necessary to lift the globe, said: "Stand still: and move the world where you are."

REGISTERED RETURNS, 1905.

	FEMALES.	MALES.	TOTAL.
Hospital In-patients...	44	140	184
" Out-patient visits	1,686	3,106	4,792
Tê P'ing City Dis- pensary (1 month)	109	153	262
Itineration cases ...	21	81	102
Total	1,860	3,480	5,340

It is interesting to note that thirty-five out of every 100 patients treated were women and girls.

Whilst the new cases were as follows:—Medical, 69 per cent. Surgical, 31 per cent.; most of the return visits were surgical. 863 patients, in addition to the out-patient fee, paid for worm-powders. Twenty out of every 100 medical cases attended to were skin diseases. Ophthalmic cases abounded, forming 43 per cent. of the surgical total.

In July, at a village seven miles away, a girl-wife in a moment of frenzy rushed at her twelve-years-old husband and stabbed him in the stomach, exposing his liver, etc.; the boy was brought straight away to Dr. Marshall, and ultimately recovered. A little boy was carried seventy *li* to hospital in early May, the fingers of both hands having grown into the palms, the result of an old burn. With free separation by the knife and skin grafting, cure followed. The tiny fellow made a comical picture during convalescence, his only clothing being arm-splints.

SELF-SUPPORT—THEORY.

The ideal seems to be, after twenty-six years of practically free

treatment, (1) for the mother hospital to maintain "child" dispensaries in neighbouring cities. (2.) When the city dispensaries have "grown up," for them to support themselves.

SELF-SUPPORT—PRACTICE.

Until the new hospital was opened all worm-patients and men with venereal disease paid for the cost of the drugs used. With the opening of the hospital on May 4th we charged small fees, as follows: each out-patient, fifty Shantung cash a visit; worm-patients and malarial cases paying fifty cash extra, and venereal patients 500 cash. The in-patient fee was fixed at 1,000 cash. It goes without saying that beggars and very poor patients continued receiving *free treatment* and *food* when taken into hospital.

OPENING OF NEW BUILDINGS.

This hospital, which was established in 1878 and has for so many years enjoyed the interest and support of many residents in North China, has now entered upon a new phase of its existence, and on May 4th the re-opening was celebrated with great éclat.

During the Boxer rising the premises were utterly destroyed, and it was thought desirable to formulate an entirely new building scheme, so as to afford scope for more effective and more varied work. The indemnity obtained from the Chinese Government being barely sufficient to replace the old premises, it has been supplemented by a grant from the Hospital Committee in Tientsin and by local contributions from Chinese and Europeans. Premises have thus been secured far more substantial, extensive, effective, and better equipped than those of the pre-Boxer days.

The buildings consist of the Main Surgical Ward (46 ft. \times 20 ft.)

floored with bricks and affording accommodation for 11 patients; the Special Surgical Ward (28 ft. \times 20 ft.) with boarded floor and beds for 8 patients; the Medical Ward (29 ft. \times 20 ft.) paved with brick and with k'angs for 9 patients; and Eye Ward, a floored room 13.1-2 ft. \times 20 ft. with beds for four patients. In a central position in immediate communication with the two surgical wards is a large, airy, well-lighted operating room (25.1.2 ft. \times 16 ft.), one of the largest in North China.

In an adjoining compound is the Women's Hospital, consisting of the Main Ward (24 ft. \times 18 ft.), and affording accommodation for 8 patients, a Private Ward, floored, for women, with beds for 4 patients; and an Operating Room opening on to the Main Ward. The buildings in the Women's Hospital were erected as a memorial to the late Mrs. Belogolovy with funds left to the hospital as a legacy by that lady, supplemented by a substantial grant from the Lao Ling Hospital Committee in Tientsin. At the north side of the main hospital compound stand the Dispensary and Out-patients' Buildings, consisting of Waiting Hall (24 ft. \times 16 ft.), Consulting and Surgical dressing-rooms, Dispensary, Eye-Room, and Store-Room, the whole being harmoniously arranged with a view to effective and orderly out-patient work.

In addition to the above there are ample quarters for hospital assistants, separate kitchens for men and women with gate-houses for men's and women's compounds and out-houses for washing, storage of fuel, etc.

No effort has been spared to make the fitting up of the various departments as complete as possible with the funds available, and the happy combination of English and Chinese taste in the decoration of

the interiors has given to all the wards a most attractive appearance. One foreign visitor being struck with the cleanliness, neatness, and brightness of the wards, remarked, "I shouldn't at all mind being under treatment here myself."

The yearly tuition expenses are \$40. This should be paid to the treasurer at the beginning of the year.

The E. A. K. Hackett Medical College for Women, Canton.

Board is provided for resident students at four and a-half dollars a month. Room, lighting, washing, books, incidentals, extra.

Students furnish their own rooms.

COURSE OF STUDY.

First Year—Chemistry, Physiology, Anatomy, Histology, Bandaging.

Second Year—Advanced Chemistry, Advanced Physiology, Advanced Anatomy, Materia Medica, Surgery, Obstetrics.

Third Year—Surgery, Obstetrics, Gynaecology, Physical Diagnosis, Practice of Medicine, Ophthalmology.

Fourth Year—Lectures on Practice of Medicine, Operative Obstetrics, Dermatology, General Pathology, Children's Diseases.

Owing to the two new buildings in process of construction, and the necessary closing of two much-used thoroughfares, we have made no effort to do more than see those who insisted upon coming to us. The air was so full of dust from the building, and there was such incessant noise from the continual

pounding, that we were unwilling to undertake many serious operations.

The course of study comprises that recommended by Isabel Adams Hampton. It includes, during the two years, lectures on

The Mrs. Chas. P. Turner School for Nurses, Canton.

Ethics of Nursing.

Hygiene.

Materia Medica, Anatomy and Physiology.

Lectures, Obstetrical, Medical, Surgical, and Gynaecological.

On Contagious and Infectious Diseases.

On the care of Children and giving Massage.

The "broom" is not yet in full working order, and it will be two or three years before the hospital can be run

Report of the London Mission Men's Hospital, Wuchang.

full strength.

I have drawn up a sort of balance sheet of the Joys and Advantages and the Sorrows and Drawbacks.

ADVANTAGES.

- (1) The privilege of working for God in a heathen land.
- (2) My colleagues.
- (3) The beauty of the country here and at Kuling.
- (4) The absence of many expected difficulties in the work.
- (5) The gratitude of the patients.
- (6) The friendliness of the Chinese.
- (7) The greatness of the present opportunity.

DRAWBACKS.

- (1) The separation from home friends.
- (2) The difficulties of "character."
- (3) Want of time for everything.
- (4) The absolute inability to cope with the needs so clamant around.

Correspondence.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR SIR: The September number of the C. M. M. J. contains an editorial on the work of the Publication Committee which all who have Chinese medical education at heart will have been interested to see. From this article I see that some books are apparently being prepared as original works by the doctors named, others are translations of more or less well-known works, some are new, others are revised editions of previous works. May I again emphasize through your paper one of the suggestions that led to the appointment of the Publication Committee, a suggestion which I hope it will act on more and more. I mention the point because it seems to me that, if the works now being published or soon to be published are going to be permanent standard works in Chinese on the subjects dealt with, the point is one essential condition of success. The suggestion I refer to (put in the form of a resolution, at the medical missionary gathering in Shanghai in the spring of 1905 and published in the C. M. M. J., Vol. XIX, No. 3, page 104) was that a committee be appointed "to carefully review the whole field of medical literature, to select therefrom a set of standard books dealing with every branch of the subject, and, where necessary, to secure from among the medical missionaries competent translators for the works chosen." I feel very strongly such is the best course to pursue and have been looking out for a list of such books, hoping the committee would publish one saying with reference to

pathology, surgery or medicine that such and such a work had been chosen and that so and so was going to translate it. I deprecate the committee publishing anything else than good reproductions in Chinese of the *very best* foreign text-books; for these alone will meet the present need. Take for instance surgery; we must have a first class manual in Chinese on the subject, and I should be extremely sorry to see any attempt to patch up existing surgery books in Chinese. What is needed is first to carefully examine the respective merits of the existing English and American text-books. There are for instance the text-books of surgery—Erichsen's, Treve's, Wolsham's, Rose and Carless', etc., etc. Then there are books on operative surgery—Treve's, Jacobson's, etc., etc. Now if the Publication Committee would weigh the merits of these and decide on one as the general manual and another one for operative surgery (or choose one like Rose and Carless, which includes both) and then get it well translated; we should have a work that would be of lasting value. The same applies to pathology. In medicine I see mention of Osler's. This a very fine work, especially the last edition, but it often leaves the student in the lurch because it does not describe some clinical methods of examining disease, e.g., blood corpuscle counting. Whilst Taylor's medicine, which though smaller, omits no essentials and indeed in some directions covers more ground, includes a most valuable description of many clinical methods. To make Osler's really intelligible to a learner, it must at the outset be supplemented

by a book on clinical medicine. Of the two, while I have used Osler's more, I think Taylor's would prove of more general use. If the committee will follow this method of choosing books and getting them translated, I am certain the resulting works will reach a higher standard than if old works are revised or individuals translate their favourite works and then present them to the committee for acceptance.

Then, Mr. Editor, I should be glad if you would tell us the procedure followed about the election of members to our C. M. M. A. How many votes are required to elect a member? Is it any proportion to the total number on the roll? or are all who secure more favourable than unfavourable votes elected? Is the result of the election made known in the JOURNAL?

For instance, in the September number twelve names are mentioned, and we are asked to vote for them *en bloc*. It is inevitable that the vast bulk of our number know nothing of the majority of the new applicants, however worthy they may be, but this cannot be helped.

What one would like to know is, what happens to each after he or she has been voted on.

With apologies for taking up so much space,

Yours very truly,

P. L. McALL.

LONDON MISSION,
HANKOW, October 3rd, 1906.

To the Editor of

"THE CHINA MEDICAL MISSION-
ARY JOURNAL."

DEAR SIR: In a recent issue of the JOURNAL you took occasion to pass the following criticism on native methods of treatment; referring to the Chinese you said: "Their own medicines are worthless, but at least comparatively harmless."

With both counts of this accusation I totally disagree.

Their medicines are neither worthless nor harmless.

To deal with this last point first. I have been called out twice, within ten days, to see cases of poisoning, due to overdoses of native medicine; one case recovered, the other died, untreated, ten minutes after I entered the house. Such a result should not have followed the ingestion of a "harmless" medicine.

In regard to your more serious criticism, that their medicines are worthless, one may argue—*a priori*—that a race of educated intelligent people, inhabiting so large an empire, cannot have failed in the course of a few thousand years to discover some, at least, of the medical properties of the flora that are found varying throughout its tropical, semi-tropical, and more temperate areas.

Similarly one may safely argue that a people whose love of money is so famous (or infamous) will not spend the huge sums of money that are spent yearly in China on "worthless" medicines.

Apart altogether from these theoretical considerations, surely most of us have seen incurable cases who have subsequently received native treatment, and whose life has been prolonged considerably beyond the period we had anticipated. There is doubtless much that seems absurd in their principles of treatment, and they have not yet the means that we have for extracting active principles from cruder drugs, but in spite of their being thus handicapped they frequently get surprisingly good results.

I am quite aware of much harm occasionally wrought by native methods, patients kept under "weakening" treatment for the reduction of the fever of phthisis, etc., etc. Is there another side to

this? Does our treatment *never* do more harm than good?

Finally, may I give an example of a method used in this neighbourhood to which I have, till recently, had a very strong antipathy, viz., the tying of a piece of red cord round a limb between the seat of an inflammatory process (in a large proportion of cases, a whitlow) and the heart.

The reason given by the patient—"to keep the swelling from spreading up the limb"—is absurd, but the treatment, *if properly applied*, is undoubtedly beneficial.

It has been shown by Bier that the passive congestion—so long associated with his name in the treatment of chronic (tuberculous) inflammation—is of great value in acute (septic) inflammation. Over a hundred cases have been thus treated by him with very satisfactory results (see Bier, *Münchener Medizin Wochenschrift*, 52, Nos. 5, 6, 7). Cathcart (Edinr. Med. Chir. Society) has also reported several cases that benefited under treatment.

Is not the red cord that ignorant coolies for generations past have tied round their forearms merely a simple method of applying that passive congestion of which we in the West have only recently discovered the value?

Yours sincerely,

G. DUNCAN WHITE,

W.D.G., M.B., Ch.B.

SWAROW, 24th July, 1906.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR SIR: At the previous meeting of the Central China Medical Missionary Association, we

found some difficulty in choosing a satisfactory Chinese title for our Association, to print on our publications.

Correspondence had revealed the fact that no Chinese title existed even for the C. M. M. A.!

I was therefore instructed to write to the JOURNAL, through you, and request "that a committee be now formed to choose a permanent title for the C. M. M. A. and report to the forthcoming General Medical Conference of next year."

I am,

Faithfully yours,

W. ARTHUR TATCHELL,

Hon Secretary.

P.S.—I have also forwarded the request to the *Chinese Recorder*.

WESLEYAN MISSION HOSPITAL,
HANKOW, 28th September, 1906.

To the Editor of

"THE CHINA MEDICAL MISSIONARY JOURNAL."

DEAR DOCTOR: I take the liberty of sending two numbers of a medical newspaper—*Sai Yi Chi San Po*—intended to be a help to those who have been our pupils some ten or more years ago, and who, having a limited supply of books, are unable to keep abreast of what is going. The second number contains also what could become the regulations for a Chinese medical association. I was asked to give out a list of medical books, and would be grateful to receive one from you up-to-date. The Chinese who translates is Cheung Kan-kwong, a former pupil of our hospital. He became 秀才 Sau Tsoi at the last examination in Canton. The price is ten cents for each number, twenty cash postage extra. Stamps received as payment.

MEDICAL MISSION STATISTICS. 1905.

[illegible]

All sums are in Mexican dollars unless otherwise stated.

👉 For Conference next year please all send Complete returns for 1906.

The new and simple clinical methods easily adopted by the Chinese will be dealt with, avoiding all that is cumbersome and expensive.

With best wishes for your work.

Sincerely yours,

Dr. J. E. KUHNE, M.B.

TUNGKUN, 5th August, 1906.

To the Editor of

"THE CHINA MEDICAL MISSION-ARY JOURNAL."

DEAR SIR: In the home lands dieting one's patients is not the least important part of a doctor's work, but in this land it seems to occupy an even more important place, at any rate in the minds and habits of our Chinese patients. One of the commonest questions they ask is 忌甚麼口. "What foods shall I abstain from?" Fish and fowl, especially the carp and cocks, and other 發物, must be avoided, and that in surgical

cases more than medical. Some of these ideas seem fanciful and even ridiculous, but others are founded on experience, and in some cases we may even learn a lesson from them. For instance, the Chinese here are very strong against taking salt in cases of dropsy, but in my English books I can find nothing on the subject. *The Medical Annual* for 1905, however, calls attention to recent observations, showing that the amount of *chlorides* retained in the tissues has an influence on the production of oedema and serous effusions; and the writers insist that in certain stages of nephritis the best form of treatment is the exclusion of salt from the diet.

If some senior worker would kindly give us some of his experience, and hints as to dieting patients on native food, I am sure it would be appreciated by many, and among them.

Yours sincerely,

FRED. H. JUDD.

August, 1906.

Personal Record.

MARRIAGE.

On August 28th, at British Consulate, Kiukiang, and August 29th, 1906, at Kuling Church, Central China, by the Rev. Dr. S. R. Hodge, the Rev. W. ARTHUR TATCHELL, M.R.C.S. (England), L.R.C.P. (London), etc., of Wesleyan Mission Hospital, Hankow, to MARJORY ALICE MARKWICK, of Framfield, Sussex, England.

DEATH.

At Chang-li, North China, September 23, the infant daughter of Dr. and Mrs. KEELER, of the Methodist Episcopal Mission.

JANUARY, 1905.

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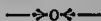
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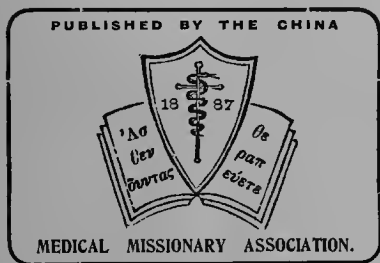
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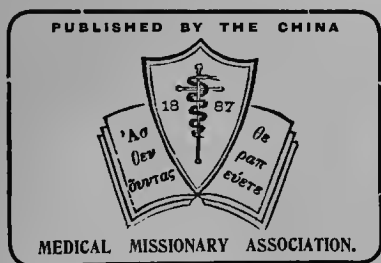
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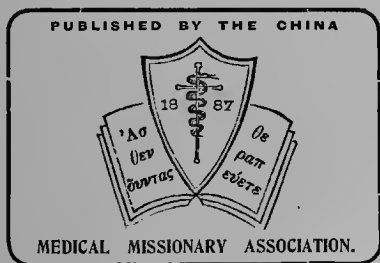
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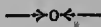
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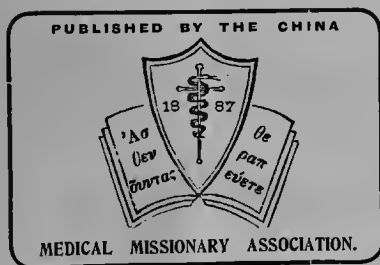
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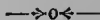
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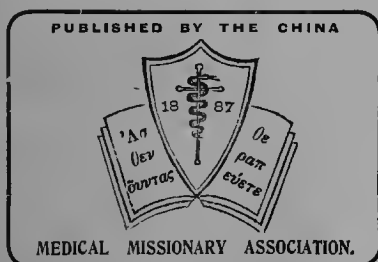
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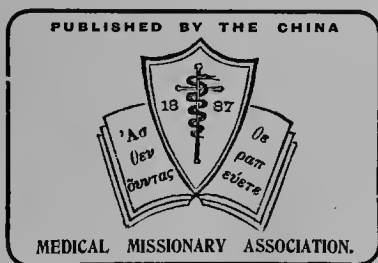
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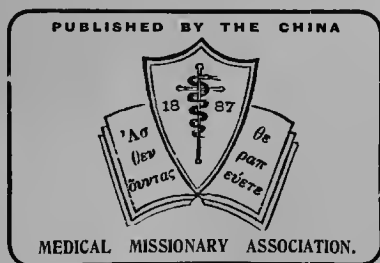
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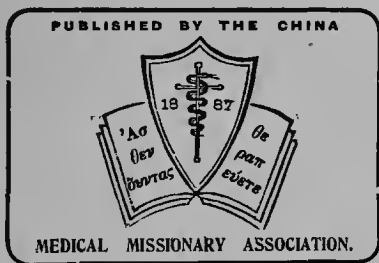
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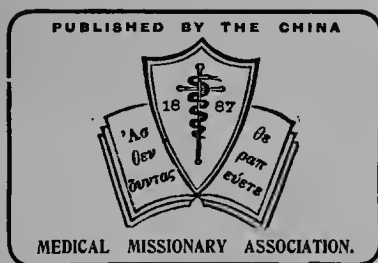
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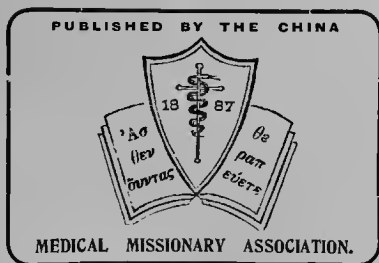
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